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Giant child-snatching pigeons

letter from the editor

I learned a lesson about how easily people believe what they see when a photo of a pigeon in the park ran in a newspaper I worked for in eastern Canada In the photo the pigeon loomed large in the foreground with children in the background appearing about half its size The photographer who took the photo wrote a caption about giant child-snatching pigeons invading the park He never intended for the photo and caption to run but he went home for the night and there [illegible] big hole on page three that a copy editor had to fill, and someone found the pigeon picture on the photographer's desk and well the result was a small flood of phone calls from hysterical parents and grandparents the next day a large apology on page two the day after that and a week's suspension without pay for the photographer and copy editor

Despite the sheer outrageousness of the claim of the existence of mammoth avian child stalkers and the fact that these readers are part of a culture that has been awash in photographic images for more than a century, and that they have most likely owned and operated some form of camera themselves they were tricked by a rudimentary photo technique

So is there any hope for these people as new hardware and software photo manipulation tools become better subtler and—more importantly—cheaper

And it certainly is getting cheaper At Comdex PacRim in January, Media Graphics International was promoting image editing software that it sells for US$10 Canadian distribution and prices were still being finalized at press time, but it is likely to retail for less than $20 in Vancouver—which gives it a lot of "can't lose at this price" appeal In addition to cheap software, free software is frequently bundled with the new consumer level scanners digital cameras and color inkjet printers These packages are not capable of the wizardry of professional programs like Adobe Photoshop but they do put the ability to alter images into more and more hands.

This month, Contributing Editor Alan Zisman writes about photo manipulation and talks to *Vancouver Sun* photo editor Nick Didlick who has strong objections to the creeping tide of uncredited photo manipulation (see page 12)

Didlick is an advocate for developing standards to give readers some indication of how a photo has been altered—from fine-tuning, such as colour correction cropping and brightening to full blown image alteration where objects are removed or added and colours changed

In the spirit of image honesty I confess that some digital wizardry has been worked on my new mug shot When the photo was taken I was standing against white mini blinds not a swirling black and blue backdrop and then there's my jaw line which graphic artist Jana Kelar nipped and tucked a tad in Photoshop

If you have an interest in performing such digital plastic surgery for either ethical or unethical ends or in simply making the sky look bluer and the grass greener in your holiday snaps, turn to our review of digital scanners (page 37), and our update on digital cameras (page 16) in this issue

Comdex PacRim

Final attendance figures are not in yet for Comdex PacRim but I was certainly busy from our perspective at the Canada Computer Paper booth Readers of several of our publications, including *Computer Player!* dropped by to share their views on what they like and what they'd like to see more of Alan Zisman has written an overview of the show and local participation for this issue (see page 10) Comdex PacRim also generated several story ideas and provided us with some new products to review that you'll be reading about in coming months

Linfield's new line

This issue also marks the return of Kevin Linfield as a columnist to the pages of *Computer Player!* His new column, *Linfield's Line* will be a how to guide alternating between software and hardware solutions In this issue he tackles basic Windows 95 disaster recovery (see page 23)

Looking ahead

Next month, we are unveiling a new business section in *Computer Player!* Coverage in the March issue will include the basics of setting up a home office and a review of the Swiss Army knives of computer peripherals—multifunction devices

Looking back

In the December editorial I wrote about a couple of volunteer organizations in the Lower Mainland that recycle old computers, and I incorrectly indicated that both organizations refurbish old systems In fact, Big Brothers Renew Crew collects the computers and peripherals but does not refurbish them The systems are sold through Value Village thrift stores

Let us know what you think,

Megan Johnston
Associate Editor
meganj@tcp ca

Your letters

Letters on issues raised in the paper or general computer topics are welcome Please be brief We regret that we are unable to look up stories from past issues, suggest products, or solve all your computer problems. Only those with names and e mail or snail-mail addresses will be published. Letters may be edited for space or content.

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Hackers & Crackers... a small error

In your *Hackers and Crackers* article, you mentioned that Robert Teppan Morris wrote the destructive 1988 Internet worm virus. This is not the full story. *The* program that Morris wrote was not intended to be a worm In Clifford Stoll's novel *The Cuckoo's Egg*, this incident is mentioned along with the fact that the worm was the result of a typo in the code that caused the program's rapid self-replication Morris was not intentionally trying to bring down the Net It was a student exercise that went bad

In my opinion it is not fair to include Robert Morris with the likes of Kevin Mitnick. Morris made an honest mistake and admitted it He was fined $10,000 and given a suspended sentence Mitnick was a deliberate vandal and thief and he's in jail.

If you print this letter, please omit my e-mail address Thanks

Regards,
Ed Thwaites, Vancouver

More on Kevin Mitnick

In a recent article, you make some statements about Kevin Mitnick, such that he is the most famous hacker of all time You should direct you readers to the following site http://www.2600.com/kevin/

You will find much information on just how dangerous the most famous hacker in history really is, and the amount of ignorance that has been demonstrated when dealing with not only his crimes, but computer crime in general

Richard Stride
Vancouver, via email

Give the Velo a hand

I just read your review of a few HPCs (hand-held PCs) in the Jan '98 issue and I must admit my disappointment Disappointed that you will crown the HP 320LX a winner when I have a Philips Velo 1 that cost almost half that with more usable features included

First of all my Velo 1 cost me $560 and it came with 4 MB RAM and 4 MB ROM that housed the Windows CE 1.0 operating system It has a built 19 2Kbps faxmodem built in Comes complete with pocket versions of Microsoft Word, Excel and Internet Explorer. Other programs included are a database, contacts, calendar, tasks, calculator and an inbox to manage your email. There is also a voice

continued on page 15

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NEC 15" A500/E500 .28	$449/529
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Sony 926S/926E CD-Rewritable	$439/419
Yamaha 4001T/4260 CD-Writer	$579/689
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One computer, hold the anchovies

BY JUNE CAMPBELL

Pizza. $1,500 computer. free! Approximately once a week, interested persons have an opportunity to build a fully operational PC and take it home with them, ready to use, thanks to Computer Nights run by a West Vancouver entrepreneur.

Malcolm Metcalfe of CompUbuild Computing Ltd., says his brainchild is proving to be a popular marketing concept. "It started a year ago as a lark and its grown totally by word of mouth advertising. I usually do it from my own home, but I will go out to other places by arrangement," Metcalfe says.

In an evening "computer party," three or four people are given a selection of computer components, which they then assemble themselves. The computers come loaded with Windows software and have been preconfigured and pretested to ensure satisfactory performance.

"For $1,500, people are given an empty case, a Pentium 155 [MHz processor with] MMX, with a 1.7 GB hard drive, 16 MB of RAM, a 24x CD-ROM [drive], speakers, fax and voicemodem, video card and monitor. They also get a tool kit—one screwdriver! I show them how to set it up themselves, but I go slow and give careful supervision." Metcalfe says.

Metcalfe says his Computer Nights have had unexpected benefits for participants. "First, it helps people overcome their fears regarding the internal components of a computer, and second, it's a fantastic parent and child project. Parents bring their kids and they work on the project together."

Bad news about the pizza, though. They've been discontinued-too messy!

Metcalfe Enterprises, 604-926-2001, metcalfe@ibm.net

Internet TV launched in the Lower Mainland

On Jan. 10, FutureNet Online Marketing Canada Inc. officially launched Internet TV in the Lower Mainland. For $399, consumers can purchase the RCA Net Channel set top box, which connects to a TV or VCR using ordinary video and audio cables. The box comes with its own browser and contains a 33.6Kbps modem that hooks into a standard telephone jack. The Internet is accessed through Net Channel, which is the Internet TV equivalent of an Internet service provider (ISP).

The RCA box does not allow the downloading of files, but users can print, receive and send email, chat, surf the Web and bookmark favourite sites.

The unit comes with a remote keyboard (containing almost all keyboard functions) that allows control of Net Channel, the television and the VCR. Smart Cards are installed as a security feature, preventing thieves from using a stolen unit without the accompanying card.

According to FutureNet independent distributor, Neil Hamilton, between 300 and 400 units were sold locally prior to the launch. He says schools in particular have shown an interest in the product as it is an affordable alternative to a PC and it eliminates the need for individual workstations, as several people can view the a big screen television simultaneously.

FutureNet is a Canadian direct marketing firm based in Vancouver. The company markets the RCA boxes in Canada and Mexico and WebTV boxes in the United States.

Neil Hamilton, 604-990-4870
FutureNet, 604 718-5700,
http://www.futurenetcanada.com

Track the stock market online with LiveQuote SRG 1.2 freeware

Mindquake Software Inc. and Stock Research Group Inc., both of Vancouver, have recently released LiveQuote SRG 1.2. This new freeware product is a 100 percent Java based application that allows end users to track their entire stock portfolio via the Internet.

With LiveQuote SRG 1.2 any user can track the stock prices of any—or all—of the more than 37,000 publicly traded companies located in North America, day or night.

continued on page 13

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Max. Resolution	1600 x 1200	1600 x 1200	1600 x 1200	1600 x 1200	1280 x 1024	1280 x 1024	1280 x 1024	1280 x 1024	1024 x 768	1024 x 768
Optimum Resolution	1280 x 1024 @60Hz	1280 x 1024 @60Hz	1280 x 1024 @60Hz	1280 x 1024 @75Hz	1024 x 768 @87Hz	1024 x 768 @87Hz	1024 x 768 @87Hz	1024 x 768 @87Hz	800 x 600 @60Hz	800 x 600 @70Hz

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Locals present or unaccounted for

Regional high-tech presence thin at Comdex PacRim

BY ALAN ZISMAN

Running for three days in late January the fourth annual Comdex PacRim exhibition brought an estimated thousands of visitors at the Vancouver Trade and Convention Centre—prior to the event organizers were predicting attendance of 35,000, about 40 percent above last year's figure At the show visitors had the opportunity to browse exhibits from 225 computer and communications companies, both local and international

In addition the conference featured four keynote speakers (transcripts from the keynote speeches are available at http://www comdex com)

- Don Calder president of BC Tel spoke about the telecommunications industry's plans to ramp up Internet connection speed
- Don Chapman general manager of Novell Canada discussed how the Internet and technological change is creating a powerful "World of Me
- Dan Ling Microsoft research director, outlined how evolving technologies will make it possible for computers to understand human speech the meaning as well as the words
- Paul Flaherty research engineer from Digital Equipment focussed on how the Internet is changing the work from information gathering to decision making

The stated focus of the exhibition was on helping business people learn to deal with rapidly evolving technology Exhibits keynotes and conferences all revolved around this theme In fact in a somewhat controversial move Comdex management for the first time limited attendance to participants aged 21 or older—a move that would have banned Bill Gates at the time he co founded Microsoft

While it was easy to lose them in the flood of better known names a number of Vancouver and B C companies had products on display These included

- Seanix Technologies the Richmond computer manufacturer boldly venturing into the competitive U S market and winning praise from publications such as *PC/Computing* and *Windows Magazine* for its product line
- Kerrisdale's Impaq Technology serving laptop users with the well-regarded Eurocom product line including new powerful 266 MHz model
- The Electric Mail Company providing an answer for businesses both large and small wanting to provide employees the benefits of Internet email without the temptations of full Internet connectivity
- FirstClass Systems offering a range of computer based training with more than 700 instructional packages
- The convergence of wireless telecommunications and computing was demonstrated by the presence on the show floor of interesting booths from BC Tel Mobility, Microcell/Fido and Cantel Wireless.
- OpenRoad Communications a division of Synergy Computer, focusing on Web and Java development
- Dominion Blue Reprographics demonstrating colour printing including colour lasers, large format bubblejet printers and other photo printing and scanning technologies
- Three local companies offering products aimed at stemming theft of portable (and other) computers Burnaby based bluVenom offers what it describes as "the first intelligent anti theft device" It locks directly into a floppy or printer port Vancouver's Absolute Software makes CompuTrace which automatically signals your computer's location to a monitoring centre And Maple Ridge company Barracuda Security Devices offers a system that includes 120 dB alarms and an optional indelible dye capsule
- Vancouver's The Media showing off a multi screen presentation of its multimedia and Web site designs that have been created for clients ranging from BC Telecom to the Clayquot Wilderness Resort
- Other local exhibitors covered the gamut from office furniture dealers to inkjet cartridge reinkers to the B C Science Council's Computers for Schools Project, to of course, our very own *Computer Paper/Computer Player* booth

However equally interesting to me were the Vancouver companies who weren't present these included some of the region's biggest technology developers such as Maximizer Software Seagate Software Pivotal Systems PriLogic MacDonald Detweiller and Glenayre as well as most of the large number of small local companies producing innovative solutions in software multimedia and the Internet It would be nice next year to see a real effort to showcase local technology providers in B C's biggest computer show ◆

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Everything else is a peripheral

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168 pin memory	up to 3 slots	Find out
ATX form card	Yes	Unlikely
ISA slots	three or four	Usually some
Nation-wide Warranty	Two year replacement	Hard to match
Advanced Graphics (AGP)	Yes	Better check
Post Factory Testing	Yes (24 hour burn-in)	Maybe, maybe not
Pre-jumpering	Yes (with cpu purchase)	For a price
Price/performance	Market leader	Distant second

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- ATX form card port and P n P [illegible]
- Bi-directional parallel port / ECP / EPP
- [illegible]

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suggested retail price

M571 Mainboard

- For Pentium 90MHz to 233MMX
- Supports Intel MMX AMD K6 IBM/Cyrix 6x86 and M2
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- Can run with single unit of 72 pin RAM
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- Supports Ultra DMA HDD and 1MB transfer rate FDD
- Four PCI and four ISA slots
- Up to 75 MHz bus speed
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- Integrated [illegible] video and ATX form card port
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- Can run with single unit of 72-pin RAM
- Three 168-pin DIMM and four 72-pin SIMM slots
- Supports Ultra DMA HDD and 1MB transfer rate FDD
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Richmond	Multilink Computers	158 - 12051 Bridgeport Road	604 278 8888
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Vancouver	New Type Computers	1179 Pacific Boulevard	604 895 0928
Vancouver	Superdata Technology	1237 West Broadway	604 737 7998
Victoria	PCI Computers	2659 Oak Bay Avenue	250 370 1177
Whitehorse	GL Electronics	305A Strickland Street	867 668 2225
Williams Lake	IMS Computer	[illegible] Avenue	250 [illegible]

Seeing is no longer believing:

Digital image alteration gets easier

BY ALAN ZISMAN

In the last verse of the Boomer classic *Heard it Through the Grapevine* Marvin Gaye (and later countless others) sang "Believe half of what you see, believe none of what you hear." But even before the Motown hit, long before personal computers and digital photographs, it was clear that seeing wasn't necessarily believing.

It didn't take long after the invention of photography before crude darkroom techniques were used to recreate history. As early as 1861 a political scandal resulted from a composite photograph placing the head of the Queen of Naples on another woman's nude body. When Joseph Stalin took power in the Soviet Union, rival Leon Trotsky vanished from historical photos such as a famous shot of him Vladimir Lenin's May 1920 address to a crowd.

But just as personal computers democratized skills like typesetting and page design, the last decade has brought the possibility of photo editing to millions of desktops. Add increasingly affordable digital scanners and cameras to more and more powerful computers and software, and virtually anything you can imagine can be made to look as if it was captured onto film.

Is nothing sacred? Some personal favorites

Not long after film star Demi Moore appeared naked and very pregnant on the cover of *Vanity Fair* magazine, the U.S. satirical magazine *Spy* featured her husband, Bruce Willis, on its September, 1991 cover, in an identical pose, seemingly just as naked and just as pregnant.

A 1994 cover of the much more serious *Scientific American* offered a photo of Abraham Lincoln arm in arm with Marilyn Monroe. Inside, they demonstrated how with an off the shelf Macintosh computer with easily available software they were able to bring together the president (who died in 1865) with the film star (who died in 1962).

A 1997 ad for Diesel jeans seemed to offer a behind the scenes look at 1945's historic Yalta conference, showing world leaders Churchill, Stalin, and Roosevelt cavorting with a group of jeans clad young women (perhaps a fitting revenge for Stalin's earlier attempts at photo-manipulating history).

COURTESY OF SPY MAGAZINE

No longer limited to trained professionals using high end equipment, photo manipulation has even become a subject for high school projects. At Vancouver's Total Education program, for example, Grade 11 and 12 students, working with humble 386 and 486 computers, a $200 flatbed scanner and a $140 Connectix QuickCam camera, practice using Corel PhotoPaint software. They quickly learn to their own images to historical photos—although they find it's more difficult to adjust lighting and shadows to make it look good.

Manipulating photographic reality can be great fun, and has been used to good effect for advertising and entertainment. The ease with which reality can be distorted poses problems, however, for publications that hope for a reputation for accuracy. After a 1982 incident when photo editors moved the Egyptian Great Pyramids closer together to better fit the magazine cover, *National Geographic* swore off photo manipulation: it wants readers to trust that any photos published reflect things as they actually exist, and the publication is now limiting digital image processing to correcting colours or removing lens flares from photos.

...worth the paper it's written on?

Many of our daily newspapers, however, have less strict guidelines. *The Vancouver Sun*, for example, prides itself on being the world's first all digital newspaper—all photos are taken on digital cameras, edited and processed digitally, and are printed on a state-of-the-art press. *Sun* Editors have not yet accompanied the digital hardware with a written policy setting guidelines for photo manipulation.

When an Oct. 24, 1997, article entitled *Reeling in the Bucks* highlighted feature films being shot in Vancouver, for example, the *Sun* printed a photo of the North Shore mountains, complete with Hollywood style letters spelling out "Vancouver."

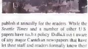
Similarly, after the prestigious Vancouver Club voted to continue limiting membership to men, the paper published a photo of the club's turn-of the century building, festooned with a "No Girls Allowed" banners, seemingly painted on bed sheets, hanging out the windows. These digital reconstructions of reality were identified to the readers simply as "Photo Illustrations" in tiny print underneath the photos.

Sun photo editor Nick Didlick, says he sometimes feels like he's forced to conduct a one person crusade to protect readers against the intrusion of photo manipulation. He says that photo manipulation software like Adobe PhotoShop "was one of the worst tools to come into the newspaper—it's filled with bells and whistles and everyone wants to play."

COURTESY OF SPY MAGAZINE

According to Didlick, "changing a photo is the same as changing a quote" and doesn't belong on the news or sports pages of Vancouver's paper of record.

He's less concerned about the blatantly obvious manipulations—these, along with the "Photo Illustration" byline, should be obvious to the readers. Instead he expresses concern that "lots more happens every day that is less identifiable and isn't clearly labeled as an illustration." Didlick would like to see his paper develop a written policy and



publish it annually for the readers. While the *Seattle Times* and a number of other U.S. papers have such a policy, Didlick isn't aware of any major Canadian newspapers that have let their staff and readers formally know their standards for photo manipulation.

As the *Sun*'s editorial artist, Vic Bonderoff is the photo manipulator. He added the "Vancouver" sign to the photo of the city skyline, for example. He agrees that sometimes he's working on the edge of a slippery slope. "There's always a danger of adding subtle editorial comments to a picture." A famous example is the case of a *Newsweek* photo that darkened O.J. Simpson's skin tones during his trial, non verbally heightening the race factor.

Bonderoff also mentions, however, that with tight deadlines he typically "doesn't have time to think" of these issues.

The *Sun*'s managing editor Paul Sullivan expressed some agreement with these concerns. "We're quite sensitive about manipulation, and try to avoid it at all costs. We're not interested in fooling the readers," he comments, adding that he too would like to have a formal policy once they've worked out the technical details of their still new hardware.

Prior to the digital era, Marvin Gaye thought we could believe half of what we see. That's no longer the case. Now that seeing is no longer believing, more than ever we need to be able to critically judge the sources of our information. ◆

BC news briefs

continued from page 8

The freeware is fully customizable. End users can select the nature of the stock and news information they receive, as well as customizing alarms that provide notification when significant parameters have changed.

Mindquake Software is a Vancouver based custom software development firm specializing in the network, database, Internet and desktop applications. StockGroup Interactive Media is North America's largest developer of corporate Web sites for public companies.

Download LiveQuote SRG 1.2 from http://www.stockgroup.com

BCIT initiates project to deliver online courses

British Columbia Institute of Technology (BCIT) recently formalized a process to encourage and enhance the delivery of online courses, which may include Internet, CD ROM and other types of "computer mediated communications" (CMC).

According to instructional development consultant (IDC), Terry Fuller, instructors with an interest in developing an online course submit a proposal. Upon approval by a CMC committee, the instructor is granted time to develop the course.

IDCs are made available to the instructor to ensure standards are being observed and to assist them in addressing the design, learning strategies and the appropriate use of CMC components.

"We used to think that online course delivery would result in reduced need for instructor time," Fuller says. "But we're finding that the opposite is true—that the development and delivery of online courses is labour intensive and may increase the instructor's workload. Instructors are finding that their role is shifting from one of instructing to one of facilitating. Online course delivery dramatically enlarges the client base and makes the school competitive globally."

OP Publishing launches outdoor recreation and tourism Web site

OP Publishing Ltd. recently launched what it claims is "British Columbia's definitive outdoors recreation and tourism Web site." The Web page contains information on fishing resorts, hunting guides and outfitters, boating and sailing. OP is the publisher of *BC Outdoors*, *Pacific Yachting*, *BC Freshwater and Saltwater Fishing Directories* and *Canadian Traveller* magazines.

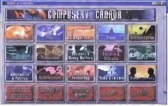
OP Publishing, http://www.oppub.com

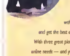
See how your bank charges compare with Strategis online calculator

Industry Canada's Web site Strategis has a new product to help you gain control of your finances. According to Internet marketing consultant, Karen Hebb, the new Financial Service Charges Calculator lets you compare the monthly service charges at any Canadian banking institution with those you would pay for various accounts or service packages at other financial institutions. "The calculator is a Javascript application, so any information you input about your personal finances will never leave your own computer," Hebb says.

Strategis Financial Service Charge Calculator, http://strategis.ic.gc.ca/SSG/ca00669e.html

June Campbell is a writer and the owner/operator of Nightcats Multimedia Productions, and can be contacted by email at campbell@istar.ca, or by phone 604-980-3261 during business hours.





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PC EDITORS' CHOICE

"Providing the best of both worlds, CSi ... delivers what we have come to expect from an online service while giving us complete and easy access to the Internet and so earns our Editors' Choice award."

— PC Magazine, May 6, 1997

Despite its vast potential, the Internet can be pretty confusing. Finding or retrieving what you need sometimes seems to take forever. And where do you go for help or support?

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Video In celebrates 25 years

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BY JUNE CAMPBELL

Video In Studios may be Vancouver's best kept secret and it's 25 years old this year. The studio is Canada's premier artist run production and distribution centre. It provides affordable facilities, training, exhibition space, distribution and an extensive resource centre for artists and independent producers working in video and new media.

Members say it's a hub of creative activity—a place where established artists and new producers cross paths to exchange ideas and support.

According to digital media coordinator Christine Stewart, the studio was founded in 1973 by a group of independent media artists with a desire to access to new technology. Of course, 25 years ago the new technology consisted of 3/4 inch Porta packs and some cameras. Today the studio has grown to include much, much more.

"Our six post production suites include two AVIDs, an MSP and an AVID MCXpress, ProTools (audio), an online video editing suite that utilizes Adobe After Effects and Premier (component Targa 2000 Pro Card) and an online Betacam room and an offline 3/4-inch U Matic suite," Stewart says.

"The multimedia suite is also used for scanning, desk top publishing and Web site development. There's one 2,000 sq. ft. air conditioned production and screening studio, a multi-format dubbing station, and production gear that includes a Hi 8 and DV Cam, lighting kits, microphones and cabling," she says.

The non profit society's mandate is to provide an affordable alternative to expensive commercial facilities that are often inaccessible to independent producers.

"We support those parts of the community that otherwise wouldn't have the capability to access these kinds of resources: artists, women, First Nations, diverse cultural groups, gays and lesbians, other non profits. Working with the grass roots side of things is a key component of who we are and how we operate," Stewart says.

Yearly membership costs $75. After completing the access workshop appropriate to the area new members wish to utilize, they can book equipment and studios at a fraction of the rates charged by commercial studios.

Will work for studio time

Members can also use our work exchange program. People volunteer in exchange for Video Bucks, which are then redeemable for time in the edit suites or for gear rental. They can volunteer to do anything from licking stamps to database entry to helping with events programming, building stuff, helping with mail-outs, diverse activities. Many people start

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Letters ...

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memo feature enabling you to record audio messages for playback through its built in speaker.

Even when the unit is closed, there is a button you press to record a quick message without opening the hard protective shell cover. All the aforementioned programs can be easily accessed by holding the Alt key along with another preassigned key along the top of the built in Qwerty layout keyboard for quick execution.

The screen is a 480x240 (resolution) with backlight and contrast control at your finger tips and weights only about 370 g (13 oz.) There is a password feature that prompts upon power on while displaying some owner information that you input—in case it is lost or stollen.

For $560, the unit came with its own docking station, rechargable batteries (you may also use two AA) and AC adapter and serial cable to hook up to a desktop PC. The unit is available without the rechargables for $499.

Since buying the unit, I have added 4 MB RAM for $60—now I have 8 MB RAM. I have also downloaded numerous third-party software off the Web. One of which is a trial version of a fax program, a handwriting recognition, a remote like explorer to access the entire HPC from the screen of my desktop and a tone dialer program that looks at telephone numbers

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Video In

continued from page 14

by volunteering their time later," Stewart says.

"Our 500 plus members represent a very diverse cross section of the community and include not only emerging artists and local independents but numerous internationally recognized folk," said Stewart.

"We are involved in numerous festivals and activities including the recent 1997 Electronic Arts Festival, Body Electric, Out on Screen, Asian Heritage Month and the Jewish Festival. A number of high profile artists have worked through Video In including two internationally recognized artists, Sara Diamond and founding member Paul Wong. Both have both won the Bell Canada Award for Video Art."

Education and workshops play a role in the services to studio members. Workshop students are exposed to both aesthetic and technical approaches to image making. Many topics are available including workshops in Internet and Adobe Photoshop image editing. A package workshop called the Weekend Shoot teaches students the basics of video production including lighting, sound recording and shooting.

CD-ROMs added to distribution roster

Video Out is the distribution arm and it's Western Canada's leading distributor of independent video. It has more than 500 titles of Canadian and international video works, many of which have been screened internationally. "And we're just now starting to distribute CD-ROMs. They must be independent and artistic works rather than commercial work. Video In can only distribute works within its mandate but we have a [illegible]," Stewart says.

The Resource Centre contains a comprehensive collection of recordings, books, magazines, artist files and video tapes documenting different kinds of video art and other artist run centres since the '70s to the present. "It's a valuable resource for archivist and education institutions," Stewart adds. "It's the largest collections of independently produced video tapes and print materials related to media art."

What kind of feedback do members give the 10 employees at Video In? They say "Where have you guys been, how come I've never heard of you, you're wonderful!" Stewart says. ❑

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Digital cameras

A buyer's market

BY LEE LESTER

Some 35 companies, with more than 100 models, are fighting for the dollars of digital camera buyers. The competition is wonderful. It's driving down prices fast. Or, at least, buyers are getting many more features for their money as manufacturers rush improvements into their newest models.

Among them are companies known for traditional cameras and photocopiers, photographic film and audio-visual electronics. Their different approaches to this new technology has resulted in a host of new features for digital photographers. Smaller cameras that preserve the best features from film cameras are no longer unusual. Some will even fit in your shirt pocket. Swiveling and zoom lenses are now common. Built-in flashes are ubiquitous.

We have looked at digicams before. For this update, we have examined only a handful of the latest to hit the market. They represent a mid-priced cluster that have, for the most part, an estimated street price of $1,000 or less. They all do a good job.

AGFA FLASHTRACK

Agfa ePhoto 1280

If there were prizes for design and ergonomics, the Agfa camera would win hands down. This $1,199 all-black beauty not only looks good, but its swiveling zoom lens provides a steadier grip than any other digital camera I tried.

A wide range of controls with large, easy-to-use buttons falls readily to hand. The flash swivels with the zoom lens and yields sharp pictures with a maximum resolution of 1,280x960 pixels.

The documentation (both printed and on-screen) is easily the best around and clearly shows how brevity aids clarity.

Snags? The e1280 is on the large side; there is no direct vision view finder; and the combined lens cap/flash cover needs only

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Canon PowerShot 350
Not quite shirt pocket sized, but you can wear it on your belt

All the important buttons face toward the user making it easy to use indeed. Again there is no direct vision view finder. The nickel cadmium batteries can be recharged without removing them from the camera.

A finger palm grip on the right side and a shutter release button on the front minimize camera shake (which blurs photographs)—but what do lefties do?

EPSON PHOTO PC 600

Epson PhotoPC 600
Comfortable grip. Direct vision and LCD monitor view finders. Capable of taking 1 024x768 pics. And all for $699.

The 600 is also pocketable with a weight of only 371 g (13 oz.). There is a minimum of good sized control buttons.

Turning the camera on is simplicity itself: just twist the lens cover. A boon for taking shots in dark or low light.

Hewlett Packard Photosmart
A basic camera that's easy to handle and comes at an attractive price. It has a direct

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Digital cameras

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vision view finder but no LCD monitor. Apart from the on/off switch and exposure button on the top, there are only five other buttons, which all face the user. A small LCD screen imparts essential information such as the number of shots taken and remaining, battery condition, type of flash being used, and so on.

Unfortunately, at its highest resolution mode, you can take only four 640x480 pictures in 24-bit colour, although 2 MB and 4 MB memory cards are available. The camera is on the large size, measuring 15.3x8.55x6.4 cm (6x3.4x2.7 in.). Together with its 550 g (1.4 lb.) weight, that removes it from the pocketable category. Great value at $279.

RICOH RDC-2

Ricoh RDC-2

Despite its 286 g (10 oz.) weight (without batteries) there is a solid feel to this camera, which can just about fit in a short pocket. The photographic background of its maker is apparent with all the features of a traditional camera: exposure control, continuous motor drive-like shooting, and a macro lens that allows pictures taken as close as 1 cm away. The LCD monitor is easily detached.

You can record up to 10 seconds of sound with each exposure for commentary, music or whatever is happening as you take the photo. Or you can use the camera as a digital recorder, enabling you to prepare a slide show on the $995 camera that can be connected directly to a TV or monitor for presentation. There is even a remote-control option available.

For professional use, the recording facility makes the RDC-2 a winner, as it enables a verbal note to be attached to each picture: a boon, say, for real estate agents as they move from room to room. High marks also for the ample yet easy-to-follow documentation.

SONY DIGITAL MAVICA

Sony Mavica

Heavy, with quality written all over it. The weight helps eliminate camera shake, and the use of standard 3.5-inch floppy diskettes for storage allows up to 40 images in standard mode, 15 to 20 shots in fine. The diskette is less likely to be damaged than the much smaller but more fragile SmartPhoto module.

The 10x zoom lens can be focused manually or automatically. The floppy goes straight into a computer without any need for wire or infrared connection.

Unfortunately, there is no direct vision view finder, and moving the disk to the next available empty spot (so another photo can be taken) seems to take an eternity. Also, the noise is distracting and I found my shots were overexposed with the automatic flash.

Despite the $999 price, no photo processing software is included. ◆

Letters

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in the afore mention contacts.

The Velo 1 unit works well with Microsoft Schedule+ with synchronizing and updating is a breeze. There are a multitude of programs available on the www for Windows CE based H/PC, both shareware and otherwise. For a limited time Philips is also offering a free upgrade to Windows CE 2.0 whenever it becomes available.

In fact I have just prepared this letter using Pocket Word on my Velo 1 and used the inbox email program to send it to you.

C.Browne, via email

Turning the page

As your editorial states in your Jan 98 edition, you are turning the page and scaling down your OS/2 coverage. Well that leads me to the conclusion that in the future I won't be turning the pages in your paper! As a personal power user and a commercial user of OS/2 I will find my info and reading material elsewhere. Happy New Year.

Regards
Michael Fakaro

Violent games have parallels to porn

I thought your article [Alan Zisman's Jan. '98 Software column] was very stupid! Ok you get all worked up on violence and nudity on games. But think... what people want to buy games that teach or learn? Get with it... most people want gore and violence...its fun! But if you don't want your kids playing it then restrict it instead of wasting trees bitching about it! But overall games are not that great! Linux is the way to go!

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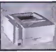

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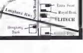

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Apple's profits: Ledgers or legerdemain?

Mac Rant

David Rosen

The Ranting One was one of many Apple watchers shocked—positively shocked—to hear the news that the company expects first quarter profits to top US$45 million. The surprising news came during the opening keynote at MacWorld San Francisco hosted by Steve Jobs, Apple's interim chief executive officer and full time Messenger from God.

"We are thrilled that our new plans are beginning to work," Jobs said, during the standing room only address. "While there is still lots of work to do, Apple is clearly coming back as a major player."

Jobs explained the profitability was primarily due to higher gross margins and continued cost cutting (read: employee layoffs). Apple also benefited from three key initiatives introduced during the previous quarter:

1. Apple's new Power Macintosh G3 computers launched on Nov 10 significantly outsold the company's forecasts for the quarter—over 133 000 units shipped versus a forecast of 80 000 units. If accurate, this would make the G3 launch Apple's most successful new product introduction in the company's history.

2. According to Apple, the company's online store (http://www.apple.com) has become one of the top ten grossing e-commerce sites on the Internet since opening its e-doors on Nov 10, selling millions of dollars worth of Macs and accessories.

3. Apple U.S.'s new partnership with CompUSA, the world's largest computer retailer, is producing results. During last quarter CompUSA outfitted 57 of its computer superstores with dedicated Apple "store within a store" environments, increasing CompUSA's Mac sales. How much of an increase? Well, at the beginning of last quarter Mac sales accounted for only three percent of CompUSA's overall PC business. After the conversion Mac sales jumped to 14 percent of CompUSA's business.

Still more surprise announcements were made at the packed MacWorld trade show. Microsoft, for example, announced that its Office 98 Macintosh Edition would begin shipping in February, months ahead of the company's Windows version. This version of Office offers Mac customers advanced functionality, including self-repairing applications, currently unavailable to Windows users. In addition, Apple announced Mac OS 8.1, an updated version of the Mac OS 8 software launched in August, as well as demonstrating QuickTime 3.0.

Microsoft makes its own software compatible

It may not be news when most software developers make their new version compatible with an older version, but it is when Microsoft does. The world's largest software company recently posted a free converter that lets owners of Word 5.1 or 6.x for the Macintosh open documents created in Word 97 for Windows or Word 98 for the Macintosh. Unfortunately, the company's press release didn't explain why Microsoft considers it necessary to change its file formats from version to version, causing its customers much hassle and aggravation. The converter can be downloaded from http://www.microsoft.com/macoffice/prodinfo/office/coexist.htm

Keeping the common touch

Of course, Silicon Valley inhabitants live differently than the rest of us, sometimes very differently. The recently departed (from Apple) Gil Amelio received nearly US$10 million to leave the company. Now comes news that Steve Jobs is getting ready to shave a few minutes off his commute by flying to work in a helicopter.

The Apple Computer co-founder has won approval to build a heliport—at a cost of about $40 000—at a former naval fuel depot near his office at Pixar Animation Studios near Richmond, a small community near San Francisco.

The city council gave Jobs a one year lease with four one-year options, and Jobs is now said to be shopping for a chopper. According to newspaper reports, he will fly from his home in Palo Alto to the former Point Molate Naval Fuel Depot, vacated by the military in 1995. His commute likely will take about 25 minutes, compared with at least an hour's drive in light traffic—far longer on some days.

To paraphrase Rudyard Kipling, "If you can walk with Kings, yet not lose the common touch ..."

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Basic Windows 95 disaster recovery

It's a computer user's worst nightmare. You turn on your computer and are greeted with a dreaded "Non System Disk" error. After staring at your monitor for what feels like hours (and verifying that you didn't leave a floppy disk in the drive), you decide that you are not going to let a pile of wires and silicon get the better of you. Now what are you going to do besides cry?

Let's backtrack for a moment. Could this situation have been avoided? An ounce of prevention is worth a pound of cure, as they say. Daily backups of important files and weekly backups of your entire system would make a whole lot of sense, yet it is estimated that over 85 percent of all home users have never backed up any of their data. Whether you use the backup software that is included with Windows or purchase third party software, it can never be stressed enough to have a recent version on tape or disk.

Do you have a bootable diskette? If you installed Windows 95 or the Plus Pack yourself, you were given the option of creating a Startup Disk. If you don't have one, click on Start, move to Settings, then select Control Panel. Double-click on the Add/Remove Programs and select the Startup Disk tab. With a single 1.44 MB diskette you now have a bootable Windows 95 (DOS 7, really) disk that will allow you to run SCANDISK, CHKDSK, FDISK, EDIT, REGEDIT and even reinstall the bootable part of Win95 with the SYS command.

And when was the last time you ran SCANDISK? If you can't answer this question, open My Computer and right mouse click on your Windows drive (usually C:). Select Properties, then Tools. Note the section "Error checking status." If the last time you checked your system was more than a week ago (or Windows could not tell when you last checked), make sure you check it now and do so every week.

Before you reinstall

Okay, you admit your system is toast. If you can access your hard drive from your Startup Disk, boot from it and back up everything important before you start messing around. After that, it's time to start hacking. (Note: do not try any of these suggestions on a working system. Use only as a last resort!)

If your machine starts booting and then fails, start Windows 95 in Safe mode (press F8 when Windows starts to boot, then select Safe Mode) and try to determine what is causing the problem. Did you change any hardware devices or add any new software? If you are brave (or foolish), you can look at the Windows registry (the replacement for WIN.INI and SYSTEM.INI for Windows 95 programs) with the program REGEDIT.

If you want to restore your registry to its state when you last successfully started your computer, boot from your Startup Disk, go into the Windows directory ("cd C:\windows" no quotes), change the attributes on your registry data file and the backup ("attrib -h -r -s system.dat" and "attrib -h -r -s system.da0"), copy the backup over the defective file ("copy system.da0 system.dat"), then do the same for the user file ("attrib -h -r -s user.dat", then "attrib -h -r -s user.da0" and finally "copy user.da0 user.dat").

Once completed, restart your computer. If your BIOS does not recognize your hard drive as being bootable, try to reinstall the boot portion of Windows 95. Boot from your Startup Disk, then type "SYS C:" from the command prompt. This will transfer the system files onto your hard disk and hopefully make your system bootable again. Now try to restart your computer.

Reinstalling everything

If the above fails, it may be wise to reinstall everything from scratch. But before you format the hard drive, make sure you have a copy of your operating system available to reinstall. Computers today are almost always preloaded with Windows 95 and in many cases you have to make your own set of floppy disks for backup. If you have Windows on floppy disks, reinstalling would be a time consuming endeavour but at least you could finish in an evening. If you have Windows on CD-ROM, you may think that you'll save time without the "floppy disk shuffle," but don't forget that Windows 95 needs DOS CD-ROM device drivers on your boot floppy before you can access your CD-ROM (sort of a *Catch 22* situation).

So if you have floppy disks, make sure they

continued on page 28

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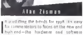
Column

The cheap PC changes everything



Softwary

Alan Zisman

In predicting the trends for 1998, it's easy for commentators to focus on the new and high end—the hardware and software coming up.

Sure, we'll see plenty of that in 1998... at least, we'll see lots of things that were already visible in 1997 become more noticeable in this new year.

For example, it doesn't take much of a prophet to predict we'll see more products out on DVD, and more players to play them (but most people and most products will continue to use good old CD ROM).

And we'll see some universal serial bus (USB) peripherals, modems, speakers, scanners and more. But again, most people will keep up using old style add ons to their computers.

High end CPUs will be faster and more powerful. Hard drives will be larger. Customers will want (and need) more and more RAM.

I even expect we'll see Windows 96. I mean Windows 97. I mean Windows 98. And whether or not the U.S. Justice Department manages to separate Internet Explorer from Windows 9x, it will be a useful upgrade. But as with the other useful enhancements, more people than not will resist the temptation to line up to be the first to upgrade.

In fact, the most noticeable and in many ways most significant trend won't be on the high end, with the new and ever more powerful. Instead, for a change, it's happening as we speak, at the low end.

PC Magazine's Bill Machrone once suggested "the computer you want always costs $5,000." Machrone's Law has remained true over the past decade or longer, even though the computer most of us have actually purchased has tended to cost between $2,000 and $3,000. Over the years, there have been attempts at marketing a cheaper computer, but most of these efforts have been ignored by most consumers—for example, customers didn't want to buy a $1,200 486 a couple of years ago, opting in large numbers for a $2,000 Pentium instead.

Suddenly, though, people have started buying cheap PCs. 40 percent of last fall's home computers cost less than US$1,000 (call it $1,400 Canadian). At that price, buyers are able to get a name brand, MMX powered Pentium 166 MHz or 200 MHz with 16 MB of RAM, a GB or so of hard drive, a 33.6Kbps modem, and a 14 inch monitor.

Not my dream machine, but still, a $2,000+ computer of a year or so ago, and one that is plenty able to run the current generation of productivity and game software, and that should have a year or two of life before it starts to feel seriously outdated.

And that's a name brand machine—an Acer, or an IBM, or a Packard Bell, or an AST. A no name clone, from one of the hundreds of little local stores will offer equivalent (or better) features, at several hundred dollars less. Before Christmas, one local vendor was advertising a clone with that feature set for $900 (Canadian). Yes, including monitor.

A market buying cheap, reasonably capable PCs changes a lot of things. It had seemed like the home PC market was saturated—and that was true at least for $2,500 PCs. A lot more people may be interested when the price drops below $1,000.

And the people who already have a computer are going to be more interested in a second (or third one). Let the kids have their own. One for home, another for the cottage.

It puts more pressure on schools to integrate PCs into the curriculum when they can buy three for what they're used to paying for one.

Strategic News Services analyst Mark Anderson (quoted in *PC Week*) expects that cheap PCs could in short order increase the number of PCs worldwide from today's 300 million to 800 million. With a potential market of that size, we could start seeing changes in product development, with new releases aiming at the many millions of existing users, rather than at the minority with new, high end hardware.

Slowing down the frenetic change might not be such a bad thing, you know... more of us might actually learn how to use one generation of products before we feel pressured to upgrade to the next generation.

On the other hand, the emerging mass market for cheap PCs may put still more pressure on beleaguered Apple. When PCs were $2,500 and Macs were $3,000, I might choose to pay a bit extra to get a Mac. But when PCs start at $900, will I pay $1,800 for a low end Mac? And with Apple having killed off the Mac clones, there will be fewer low end Mac alternatives.

In fact, with all the talk about the presumed evils of the Windows Intel monopoly, it all seems a bit ironic... monopolies are supposed to lead to artificially high prices for consumers. Instead, spurred by plummeting prices for RAM and hard drives, we're just seeing the beginning of the cheap PC. Will it lead to getting a computer as the prize in a Crackerjack box? Sign on with an Internet service provider, get a free PC?

Tune in to this space next year... we'll see! ●

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Authors offer advice to online health and wealth

BY CHRISTOPHER GULY

They've been called the Lennon and McCartney of the Canadian Internet, and with the 18 books they've written—of which they've sold 400,000 copies in less than four years—Jim Carroll and Rick Broadhead have clearly entered the pantheon of cyber gurus.

They don't appear to be planning on breaking up soon, having recently released six new tomes, including the *1998 edition of The Canadian Internet Handbook* (Prentice Hall Canada Inc., $24.95). The first edition was released in 1994, when the notion behind the medium was novel.

The 1998 version reflects how mainstream the Internet has become, with a section looking at its implications on Canadian culture—an area traditionally reserved for radio, TV and movies—and the governmental and legal issues surrounding cyberspace. Appropriately, the subjects covered in Carroll's and Broadhead's handbook are as ubiquitous as the Internet itself.

The authors look at the increasingly important business side to the Web, explaining how companies are failing in their use of the technology (outdated Web sites) and, even more compelling, in their "lack of senior management involvement."

Frayed chicken?

On the rubber chicken circuit Carroll travels, he says he's constantly meeting corporate

continued on page 28

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Win CE gets games—finally

BY ALAN ZISMAN

Remember GameBoys? Popular with the sub-teen set a few years ago, these were black and white handheld game-playing units from Nintendo. For a couple of years, you'd see kids toting them everywhere.

It's been a while since I've noticed anyone with a GameBoy. But they remind me a lot of today's Windows CE handhelds: tiny PCs that can handle a word processor, spreadsheet, Web browser, email, calendar and phone list. They too have monochrome screens. Cost is roughly $400 to $800 from companies such as Casio, Compaq, NEC, HP and Philips (to name a few). They're about the size of a GameBoy, but less fun—because, aside from the included Solitaire, where are the games?

Useful as a CE might be, it can't count as a successful computing platform until there's a critical mass of games. What's the point of having a PC that will fit in your pocket and run for two weeks on a set of batteries if there aren't any games you want to play while waiting for the bus or hanging out in the airport terminal? There's only so many times you can review your notes for the business presentation, after all!

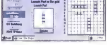
Here's Johnny!

Microsoft has recognized that all work and no play makes CE a dull handheld platform. As a result, it has released the Entertainment Pack for CE with ten games for the midget computers.

Don't expect miracles: they're faced with the same limitations as other software designed to run on the handhelds. Because there are no floppy disks or CD ROMs, you need to load the software onto a Win95/NT PC and shoot it across to your CE using a serial connection. And because a typical CE machine has to store all its software in its 2 to 4 MB of RAM, games need to be tiny. And while CE 2.0 supports colour, the games, like virtually all the CE units in use today, feature four shades of grey—in other words, monochrome.

So what do you get for your $44.95?

A nice chess game; Space Defence, a clone of the classic Missile Attack (knock out enemy missiles by poking the screen with your stylus); Black-jack; the classic kids pre-digital handheld game Battleship, where you try to locate and sink enemy ships on a grid; Codebreaker; Freecell and Hearts, identical to the games that ship with other Windows versions—although multiple CE owners can play Hearts with their units communicating via infrared (finally a practical use for the IR ports!); and another Windows classic, Minesweeper.



Also included are Reversi (aka Othello) and (snuck over from the big computer's Entertainment Pack) Taipei, a nice reworking of Mah Jong.

Survival of the funnest

Since every bit of RAM on a handheld is a precious resource, you should only install the ones you think you'll like (or try them all, then delete the losers).

Even with this software, my son's GameBoy was a better game platform. But it didn't do the Internet like my CE handheld. Still, I wish that while the Gnomes of Redmond were porting over their favourites from the old Windows Entertainment Packs, they'd have included that package's Tetris. But I guess that leaves me something to look forward to—a second edition with another set of mini games. ◆

Lindfield's line

continued from page 23

are kept in a safe place away from magnetic fields and children's sticky fingers. If you have a CD ROM, make sure now your Startup Disk can access your CD ROM and, if not, you will have to obtain the DOS device drivers and manually add them to your disk's AUTOEXEC.BAT and CONFIG.SYS files.

Also, make sure you have the various applications and additions needed to bring your system back up to fighting form. You may need to keep a backup of your Internet service provider's software, as well as any service packs or updates that you applied to your system.

Once everything is reinstalled, take small comfort in the fact that your system is most likely more responsive and takes up less hard drive space. Many Windows 95 power users reinstall their systems every few months to clear away the junk in the registry and remove the excessive garbage placed on hard drives when lots of software is installed and uninstalled.

Kevin Linfield's exciting new column will alternate between PC hardware and software issues. He can be reached at linfield@idirect.com ◆

Prolific pair

continued from page 26

executives' [illegible] in the [illegible]

"The [illegible] billion dollar insurance company told me, 'I don't think the Internet is going to affect my business,'" says Carroll. "I just looked at him and began to wonder what kind of drugs this guy's smoking, because they must be pretty good."

While you won't find any direct reference to drugs in the 1998 handbook's Entertainment and Leisure section, you can learn how to find online discussion groups that might deal with the subject.

For another take on the topic, say the medical uses of marijuana, you can always check out *Good Health Online: A Wellness Guide for Every Canadian* (Prentice Hall Canada Inc., $16.95), also written by Carroll and Broadhead.

The guide covers information sources (health care organizations, professional medical associations, [illegible] the Net) as a medical bible of sorts (keeping up-to-date on medical breakthroughs) and the ten risks in doing so (are those offering the online advice credible?).

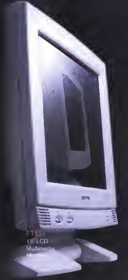
Perhaps as tricky for some is turning to the Web for financial advice. Authors Carroll and Broadhead pick up on that uneasiness (particularly in light of the role the Internet played in the recent Bre-X gold scandal) in yet another recently released book, *Mutual Funds and RRSPs Online* (Prentice Hall Canada Inc., $16.95).

"The Internet provides the perfect environment for scam artists to operate," they warn. Judging by the booming business Carroll and Broadhead are making from it, the Internet—and its foibles—also seems to be the perfect topic people can't stop reading about.

As the host of CBC TV's Newsworld opines in the foreword to the 1998 handbook: "The Internet has irrevocably changed not only the way we do things but even the way we think about how to do things."

For Carroll and Broadhead, it's clear they're thinking of the Net as a sure thing to think about, share those thoughts with the rest of us, and make a good living. And judging from their latest offerings, the two are thinking clearly. ◆

Is It a Coincidence?



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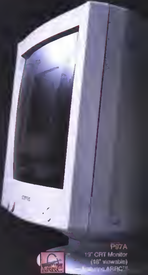
Because…



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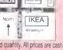

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Office 98 for Macintosh:

Hero's welcome expected for MS office suite

BY LEE LESTEN

Microsoft Excel and PowerPoint began their lives on the Mac. Now they have returned to it. And they're very welcome too.

The two programs are in Microsoft Office 98 Macintosh Edition together with Word, Outlook Express, and, of course, the increasingly ubiquitous Internet Explorer 4.0. Gone are most if not all of the annoying Windows tricks present in Office 4.2. Microsoft learned that having 90 percent common code was a good thing in theory that didn't work out in practice. Mac users, it quickly discovered, just don't look at things through Windows.

Today Microsoft has a 130-strong team working on Mac applications. Some are even members of the groups that worked on the original PowerPoint and Excel.

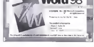
I looked at a beta version of Office 98. It's B-I-G! With all the goodies, such as Equation Editor and clip art that came with it, it took up a humongous 437.1 MB.

And it only runs on PowerPCs. Those who still have 680x0 Macs need not apply. Even on PowerPCs you need at least a 120 MHz processor, System 7.5 or later, 16 MB RAM (32 MB recommended), 49 to 120 MB of hard disk space and a CD-ROM drive, as the suite won't be available on floppies.

The finished product goes on sale in March. Price for an upgrade is $299 and $499 for the full thing. There's also a gold edition, $559 and $889 respectively, which includes Bookshelf, Encarta Deluxe and Front Page Web site creator and management tool.

Vice-like grip?

Are they worth it? A preliminary run through indicates rival Corel boss Michael Cowpland, already beset by headaches from falling sales, is going to have to switch his Aspirin for Tylenol 3.



Office is smooth, very smooth. Microsoft's IntelliSense, which extends such things as columns and rows in Word and Excel tables and charts, and even supplies the endings of frequently used words (type "Jan" for example and it supplies "uary") are real time and labour savers. Spelling, grammar, punctuation and conversion to HTML are handled automatically. Begin to enter a help question and the answer is likely to come up before you finish typing.

Drop a hyperlink into a document and the recipient only has to click on it to go to the Web site. Even if you inadvertently throw out essential parts of the program it replaces them from compressed memory upon restarting.

Microsoft has gone out of its way to make Office 98 easy to use. It has taken note of what Macheads want. Extensive market research and intense use of its usability labs, in which it studied Mac users at work, have paid off with a product that should find a home in any office or an office in any home. ◆

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Photoshop guide has it all in a nutshell

info box

Photoshop in a Nutshell
A Desktop Quick Reference
By Donnie O'Quinn and Matt LeClair,
from O'Reilly & Associates
www.ora.com
US$19.95

BY MARC DACEY

The graphics powerhouse program Adobe Photoshop is arguably one of the most important chunks of software running on both Windows and Macintosh platforms. Certainly, it's one of the most talked about. Photoshop is praised and cursed in equal measure: lauded for its incredible ability to transform, alter and prepare complex graphics and text elements for publication, and cursed for its very high demands on all but the most robust desktop computers.

Simple it isn't, and that's where the O'Reilly & Associates *In a Nutshell* series comes in. Unlike many computer program reference works on the market, the *In a Nutshell* books focus on users who either already possess a broad knowledge of computing and are looking for specific instruction on a particular program, or for those who are already familiar with the program in question and require a logically organized and highly cross-referenced work that breaks out not only all the obvious features, but also reveals hidden tricks and tips.

Photoshop in a Nutshell does not disappoint. Authors Donnie O'Quinn and Matt LeClair are not only computer graphics artists but also educators of and consultants to such artists. The pair have previously penned *Digital Prepress Complete* (Hayden Books) and have mastered the transparent O'Reilly house style.

In the case of *Photoshop in a Nutshell*, which focuses on the recently released Version 4 of this benchmark program, that means only the most dedicated pixel pusher will read this hefty tome all the way through. More likely, readers will absorb the book in chunks, topic by topic, as it helps to unravel Photoshop's many mysteries—including the dozens of options in the Filter menu, the Byzantine terminology of layering and channeling, and how to automate and "shortcut" many of Photoshop's actions.

Sweat the technique

Included with the book, and perhaps worth the price of the book to those most into self-study, is a thorough appendix of some 80 pages on Photoshop "common techniques." Assuming that the reader has already understood the terms defined in previous chapters, the appendix gives a compressed overview of keystroke combinations and numbered actions required to perform all of Photoshop's graphical manipulations.

Also useful from the point of view of saving time if not money are the helpful "Note" boxes contained throughout the text. These often clarify specific points or indicate that while a particular action can be performed in Photoshop, using a sister application (most often Adobe Illustrator) will save time and

continued on page 34

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Ride the i-skyway

Industry Canada backs communications space race

BY CHRISTOPHER GULY

Pundits and computer experts are obsessed by the Year 2000 coding conundrum in an attempt to avoid information gridlock. But when the Internet, the next millennium holds the promise of transmitting the information highway on to the information skyway, according to Communications Research Centre president Gerry Turcotte. Traditional fibre optic cables will become passé as satellite-driven skyways enter the scene to transmit vast amounts of information at super fast speeds, even to remote areas that cannot support terrestrial-based cables.

This successor technology is emanating from the Advanced Satellite Communications Program (ASCP), established under the federal government's Canadian Space Agency. Industry Canada's CRC, based in Nepean near Ottawa, manages the program.

In mid-December, Industry Minister John Manley awarded $47 million to five Canadian high-tech companies for the development of innovative satellite technologies (the CRC received $2.8 million to administer ASCP). Under the program guidelines, participating Canadian companies are required to match at least 25 per cent of the total for 12-month tenders. Over the next four to eight years, the Canadian Space Agency has committed $31 million as its share of the overall investment, with industry expected to pick up the $15,728,000 balance.

Canada's fantastic five

Based on Manley's recent announcement, the five participating companies will share $15 million of their funding. They include:

1. Ottawa-based **CAL Corp.**, which is developing advanced laser technology for satellite-to-satellite communications—where satellites can be as far as 10,000 kilometres apart. The 24-year-old company's Optical Front End hardware design for Optical Inter-Satellite Links (OISL) addresses high-bandwidth communications between satellites either through Radio Frequency (RF) or by optical means, which can support higher data rates with less total power and mass, and lower unit costs. Inter-satellite links are antennas used to communicate between satellites, while RF gateway links are antennas used to communicate between satellites and ground stations.
Total contract value: $2.7 million, of which CAL has invested $700,000

2. COM DEV International Ltd. of Cambridge, Ont., which is developing products in four technological areas: OISLs, RF gateway links, (OSI) digital communications technology, and ultra-small microwave and RF processing technology. COM DEV's system will include 66 satellites in low orbit.

Low-orbit satellites move around the Earth, travelling at speeds as fast as 15 kilometres per second. COM DEV already manufactures OISLs and ISLs for Motorola's Iridium, the only low-orbit satellite system in operation. The company will launch about 20 more of these satellites over the next decade.
Total contract value: $12.2 million, of which COM DEV has invested $3 million

3. Northern Telecom Ltd.'s Ottawa operations, which will be developing technologies for low-cost user terminals designed for the next generation of broadband satellite communications systems expected to be in service by the year 2000.

Nortel's project includes the advancement of Ka-Band (20/30 GHz) RF, the development of Baseband and Satellite Interface Modem hardware and software, and the design, fabrication and testing of Radio Front End Units.
Total contract value: $16.4 million, of which Nortel and its partners (Spar Aerospace Ltd. and MT Communications Systems) will invest $[illegible] million

4. Spar Aerospace, based in Ste-Anne-de-Bellevue, Quebec, which will be designing, constructing and testing advanced satellite payload technologies.
Total contract value: $21.2 million, of which Spar will invest $5 million

5. Telesat [illegible] near Ottawa, which [illegible] its newly unveiled Multimedia Satellite Technology Development and Trial Program.
Total contract value: $10 million, of which Telesat will invest $1.2 million

Look up-way up!

So far, Canada has put 18 satellites into orbit, including RADARSAT-1, considered the world's most sophisticated commercial Earth-observing satellite. Telesat, which launched the world's first domestic commercial communications satellite (Anik A1) in stationary orbit above the Earth in 1972, will send a new direct broadcast satellite into the skies this fall. The DBS satellite will carry the signals of ExpressVu, one of Canada's new direct-to-home television services, and a new service called Electronic Digital Delivery, which will allow TV viewers to order movies and other programming downloaded by satellite.

While plans to send the satellite into orbit are moving ahead, it so far remains nameless. But that will soon change. Like Anik, which means "little brother" in Inuktitut (so named by Quebecker Julie Frances Czaplar), Telesat Canada has received an enormous number (more than 6,000) of suggestions for satellite monikers as part of a national name-that-satellite contest launched last November. Among the ideas received: The Mother of All Satellites, El Nino Canada's Third Rock from the Sun, Princess Leia Launcher, Earth Guru Canadian, The Celestial Maple, Galaxy Eater, Nucker Canucker, Shiny Beaver, Mounty Vision, Buzz Lightyear and, believe it or not, Poutine.

In March, a panel of judges composed of the likes of Bryan Adams and Dan Aykroyd will decide which name Telesat's new orbital baby will receive. The winning entrant will have his or her name placed on the satellite below the chosen name.

Other prizes include an ExpressVu direct-to-home satellite TV system, Telesat's DirecPC Turbo-Internet system, a digital VCR to rent movies via satellite, and a more down-to-earth all-expenses-paid trip to San Francisco. ◆

Photoshop guide

continued from page 33

[illegible] While such suggestions may seem to be a transparent plug for Illustrator, other competing graphics programs are covered as are the various pluses and minuses of preparing files for use in Photoshop in other programs.

It's helpful to see this acknowledgment by the authors that Photoshop does not work in isolation from other programs and that perhaps more than any other program of its type it depends on the user's grasp of how graphics files are created and transformed before they are worked over in Photoshop in order to get the most from the program. Highly recommended. ◆

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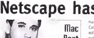

David Rosen

Battered in the battle of the browsers, Netscape Communications saw its shares plummet 21 percent during January.

Microsoft gives away its Internet Explorer for free while Netscape charges for the full version of its Navigator software.

The US$4.81 per share drop to US$18.56 came after Netscape stated that price chopping, lost corporate accounts and restructuring would result in a US$85 million to US$89 million loss in its final quarter.

Spare a little Sympatico

The online service run by Canada's telephone carriers is now in 370,000 homes across the country, a 260 percent membership increase since last year. It records 25 million page views a month which is 500 percent more than last year.

But those figures pall almost into insignificance compared with America OnLine, whose membership now tops 10 million, worldwide.

A graphic performance

Another big number: MaranGraphics sales have gone through the 5 million mark. The Mississauga, Ont., publisher of simple and colourful how-to books currently has four entries in Ingram's Top 50 most requested titles for operating systems.

Silly con by Silicon Graphics?

Silicon Graphics (SGI), the high-end graphics and workstation manufacturer, faces at least four class-action lawsuits from angry investors. They claim the company and its executives profited from rising share values before admitting a much poorer financial picture that sent stock prices plummeting by as much as 40 percent. The investors allege officers and directors made US$7.4 million when they sold 286,584 shares.

SGI says the lawsuits are without merit and that it will defend itself vigorously.

Browsing discrepancies at Star Trek

The Microsoft Network (MSN) is moving free material to the World Wide Web to attract new subscribers. Among the goodies is the highly popular *Star Trek*. But many of its best features are only available to users of Microsoft's Internet Explorer. Not even a cry of "Beam me up, Scottie" gives Navigator users the look at Star Fleet headquarters enjoyed by Explorer users.

The usual suspicions have it that it is yet another ploy by the software giant to break arch rival Netscape. Microsoft maintains that IE 4.0 provides superior features for companies that sign up with it. Among them: better animation, sound, and interaction.

Eye, eye, give us the money!

Britons will soon be able to forget their PIN numbers when they eye their money. Customers of the Nationwide Building Society will have a stereo camera look at their iris patterns when they go to draw cash from banking machines. Each pattern is as unique as that of a fingerprint.

The society will test biometric iris identification technology, which comes with cameras that can take a digital image of the iris up to a metre away even through glasses, contact lenses, or at night.

The digital "iris code" is then compared with a sample previously given by the customer. Money is only dispensed if the two match.

Sensar, the American developer, says the camera even checks to see if the eye is pulsating. If not, it says, the machine will know it is seeing only the picture of an eye or that the person "looking" at the camera is dead.

Toshiba says Sayonara to consumer desktops

Toshiba is quitting the cheap desktop market. It is a sector its Canadian subsidiary has never contested. But, in the United States, it has decided there is little or no money to be made from computers that sell for less than US$1,000 and will phase out its low-end Infinia line, which was intended to compete with Compaq Presarios, Hewlett Packard Pavilions, IBM Aptivas and Packard Bell.

Some American retailers say 70 percent of their sales are for less than US$1,400, with 30 percent under US$1,000. The Infinia had a US$2,000-plus price tag. Toshiba will concentrate on big business sales, but does not rule out re-entry into the consumer SOHO desktop market.

"My mom in-law says it's okay"

A Santa Clara, Calif.-based startup company believes it has a foolproof way to market its products. Before they go on sale, it gives them the mother-in-law test.

Headed by former Novell chief executive officer, Bob Frankenberg, Encanto plans to sell a US$1,000 computer to non-techie small business owners that will enable them to set up their own Web sites.

The tester was Frankenberg's mom-in-law. A computer novice, if she couldn't work something out, it didn't go into the finished product.

Users connect the computer server with a PC or Macintosh with a cable. They then answer questions about what the site should say and how it should look. The 133 MHz Java-enabled computer builds the site and Encanto says it can cut the usual US$3,000 to US$15,000 cost by at least a third.

continued on page 40

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Amiga, the third alternative?

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http://www.softhut.com

BY PAUL ANGYAL

In the same week in mid November that visitors to the Fall Comdex '97 immersed themselves in the glitz and [illegible] and hitter of the Las Vegas casino place [illegible] Computer [illegible] the annual [illegible] the European [illegible] Amiga [illegible]

This [illegible] [illegible] Although the game largely faced in the past few years in North America it's quite a different story in Europe. Here Amiga has even expanded its presence (mostly into Eastern Europe) during the turbulent past four years. And turbulent they were: how many other high technology companies have survived two bankruptcies?

With its financial backing solidly in place after its acquisition by Gateway 2000 last March (Gateway is the innovative computer mail order firm from Sioux City, Iowa) Amiga put on an impressive display [illegible]

[illegible] likely question [illegible] [illegible] Add to this that the Amiga OS is actually very good for [illegible] expandable, native 32 bit and can be made to run on different processors, and you've got something potentially very rewarding growing in your garden.

Second, the Amiga technology performs at its best in bringing different media seamlessly together without conflict. Consequently [illegible] could very well position itself early [illegible] important players in the emerging [illegible] multimedia market sector, which many are calling "the next generation PC."

Amiga has a technology based on a highly modular architecture that is uniquely adaptable to expansion and makes it easy to write software for it in a number of programming languages (C, C++, Pascal and Fortran to name a few).

Amiga technology fits just as easily into a personal computer as a high end graphics workstation. Amigas can be expanded, their performance speed boosted, without having to throw out the core or compromising overall efficiency and reliability. As Petro Tyschtschenko, Amiga International's chief, says, "For the Amiga, the processor is not the main thing. It's just one thing."

At the show, the most important announcement (of many) was Gateway's reaffirmed commitment to continued research and development funding through its newly created Amiga Inc. subsidiary. Also based in Sioux City, Amiga Inc. will be operated as an independent entity. Other major news included a strategic aggressive push for licensing the technology (either in its entirety or in part, including the Amiga OS) to third party manufacturers and developers.

In fact, the licensing has been going so well, according to Tyschtschenko, that "we should maybe begin sending them money" — a good humoured reference to Gateway's third quarter [illegible] figures. By mid-October over 400 licence applications were received and many have been signed, resulting in a whole slew of new product introductions, from complete new systems to major components. Thousands of professionally performing software titles, from games (Myst for the Amiga is out) to serious business applications, are already available at a fraction of comparable PC (or Mac) prices, and new ones are being developed.

On the OS front, the current version 3.1 is [illegible] already stable, robust and with a [illegible] is expected [illegible] release [illegible] spokesperson [illegible]

[illegible] new Amiga [illegible] its standard [illegible] equivalent Zorro [illegible] dual [illegible] more four channel stereo sound [illegible] ROM drive, a 1.7 GB ultra wide SCSI [illegible] hard drive and lots of expansion slots.

Another "fully loaded" motherboard came from Index [illegible] called BoXeR, which brings you as close to allowing you to build your own Amiga as possible. From the United States, Nova Sector Engineering was on hand with their advanced Amiga based graphics workstations (some of which were used in making Jurassic Park). Nova is rumoured to be working on an Amiga Notebook running on PowerPC, due out at the same time OS 3.5 is released next year.

Amiga is moving to PowerPC — was the main theme on the input [illegible] processor. Traditional Amigas run on the Motorola 68000 series of CPUs, the latest being the 68060 (that's the one mounted inside the DCF A6000). Several licencees make accelerator boards, however, adding exponential performance with the super fast 603e or 604e PPC chip.

Phase 5 Digital, also of Germany, unveiled details of an interesting new computer design concept based on the Amiga architecture, code named A/Box. It is a modular expandable never to become obsolete again design principle, where you will be able to replace, upgrade or expand different sections and components without compromising the whole. A/Box uses a 64 bit internal bus structure that runs at 100 MHz clock speed and will be able to utilize industry standard interfaces. Its development is a widely collaborative effort. A/Box should get a final name soon as it is expected to be released to the marketplace sometime next year.

By the way, Phase 5 is a company with a delicate sense of humour. Their trademarked slogan reads: "where do you want to be TOMORROW?"

A few final notes

The year 2000 problem is a non issue for Amigas. Epson has promised Amiga drivers for early next year and there are at least two excellent Web browsers out there (iBrowse and Aweb II) for surfing the Net.

If you are on the market for a new multimedia home or home office computer that does it all for less, if you are in no big hurry and are not pre sold on a PC or a Mac, you may want to consider the Amiga alternative—once again. You might be pleasantly surprised.

After all, it's about choices or the lack of them—and you can always chicken out ◆

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BY ALAN THWAITS

Here's a roundup of seven new scanners aimed at the home and small office markets. The models include four flatbeds, two sheetfeeds, and one designed exclusively for reproducing photographs. These machines all do pretty much the same thing: they will scan your text or photos, translate them into digital files (for editing or archiving), and allow you to print, fax, or reproduce them on a Web site. There's not a whole lot of difference in the software supplied with these scanners either, although some have more and some have less. Hardware varies, of course, with format.

What will influence you to purchase one unit over another is how they fit in with your usage, available space, and budget. I've come up with my own "best of show," but the final choice is up to you. Read on!

Storm Technologies EasyPhoto
Storm's EasyPhoto unit will win a lot of fans—it's an inexpensive, easy-to-use flatbed scanner optimized for digital photo reproduction with Storm's ClearScan II technology. It's considerably more compact than the other flatbed scanners reviewed here, which will appeal to those with limited space. It's obviously aimed at first time scanner owners and those using a scanner for personal and home use.

Pluses.
- user friendly interface
- comprehensive software
- excellent price point

Minuses.
- large footprint
- use limited by flatbed format

Includes.
- Easy Photo software
- Adobe PhotoShop deluxe
- Xerox TextBridge OCR
- DocuMagix PaperMaster
- one-year warranty

Specifications: 600x300 dpi optical resolution, up to 5,000 dpi enhanced, 30-bit colour scanning (1 billion plus colours), 256 greyscale and black and white scanning, minimum scanning size: wallet size, maximum scanning size: 8.5x11.7 in..

System requirements: Win 95 or 3.1, IBM compatible with 486 or higher processor, 8 MB RAM (16 MB recommended), 30 MB free hard drive space, CD-ROM drive.
Price: $229

Polaroid PhotoPad
The PhotoPad is the first scanner offering from the company that created instant photography. It scans both colour and black and white photos up to 4x6 inches, in both 35 mm and Polaroid formats, in a snappy 60 seconds or less per image. This unit should be very popular with small office and home office people, creative image services, and folks who produce newsletters.

Pluses:
- easy and quick install process
- extremely small footprint
- fast
- attractive price point

Minuses.
- use limited to photo formats

Includes.
- Polaroid SuperColor interface software and Mix and Match image editing software
- scanner calibration card

Specifications. 100, 200, 300, 400 dpi resolutions, 24 bit colour (up to 16 million colours), 8 bit black and white (up to 256 shades of gray), 5.5x6.2x3.5 in. in size, weighs 350 g, minimum photo size: 1.5x2 inches, maximum photo size: 4.5x6 in.
System Requirements. IBM-compatible with 486 or higher processor, 4 MB RAM (8 MB recommended), 13 MB free hard drive space, Win 3.1 or higher
Price: $199

LOGITECH PAGESCAN USB

LOGITECH FREESCAN

Logitech FreeScan
Logitech's FreeScan desktop scanner offers a couple of major features. One is its compact size—an important consideration on your busy desk or worktable. Another is the flexibility offered by FreeScan's three scanning modes: multiple documents can be scanned via a rear mounted sheet feed, single documents via a front feed slot, and bound materials via a detachable, motorized scanner head. Those options, plus good colour-reproduction capabilities and Logitech's excellent reputation, make this unit a standout among desktop scanners.

Pluses:
- small footprint
- input and output versatility
- self powered scanning head

Minuses.
- high system requirements
- high price point

Includes.
- Adobe PhotoDeluxe
- Xerox TextBridge OCR
- DocuMagix PaperMaster
- one-year warranty

Specifications: 600x600 dpi resolution, 4,800x4,800 enhanced, 30 bit colour, 8-bit greyscale, 1 bit black and white, 6.3x12.5x8.3 in. (16x31.5x21 cm) in size, weighs 8.8 lb (4 kg), minimum scanning width: postage-stamp size, maximum scanning width: 8.7x16 in. (22x40.6 cm) with AutoStitch, maximum/minimum scanning length none (only limited by desk space)
System Requirements. Win95, IBM compatible with Pentium processor, 16 MB RAM (32 MB recommended), 100 MB free hard-drive space, CD ROM drive
Price: US$299

Logitech PageScan USB
The PageScan USB scanner is Logitech's

continued on page 39

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Scanners on the horizon

continued from page 37

answer to the latest in desktop systems but it comes with a catch your computer must be MMX-equipped and have an available USB (universal serial bus) port That translates into installation and scanning convenience and power for those who have the right technology

Pluses
- very small footprint
- plug and play capability
- USB capability
- doesn't need external power source

Minuses
- high price point
- high system requirements

Includes:
- Adobe Photo Deluxe (full version)
- Xerox TextBridge OCR for Logitech
- Logitech ScanBank software
- online help system
- tutorial
- one year warranty

AGFA SNAPSCAN 310

Specifications 300 dpi resolution, 24 bit colour 8 bit greyscale /black and white, 3 62x12 40x2 52 in (9 2x31 4x6 4 cm) in size weighs 1 95 lb (877 g), minimum scanning width postage stamp size maximum scanning width 8 5 in scanning speed three pages per minute

System Requirements. IBM or compatible system with Pentium processor with MMX technology, available USB port Windows 95 version 4.00 950B 16 MB RAM (32 MB recommended), 90 MB free hard drive space CD ROM drive

Price US$229

Agfa SnapScan 310

Agfa's SnapScan launched at the COMDEX/SCIB 97 show is a colour digital scanner aimed at the home and small office markets The PC version requires that you add a SCSI card to your desktop box if you don't already have one so Agfa supplies an Adaptec AVA 1505AE/AI card SCSI cable and EZ-SCSI Lite software. Of the flatbed scanners reviewed here this one was the most impressive solid construction, great interface and very useable

IMAGEWAVE

Pluses
- attractive case
- user friendly interface
- good price point

Minuses:
- large footprint
- lengthy install process
- use limited by flatbed format

Includes.
- Scanner driver Software (FotoLook and FotoSnap)
- Image editing software (Ulead iPhoto Express for Win95 and NT, Ulead iPhotoPlus for Win 3.xx MicroFrontier Color It! for Macintosh)
- Text scanning software (Caere OmniPage Limited Edition for PC)
- Scanned document management software (Visioneer PaperPort, including Caere OmniPage Lite for Mac and PC)
- Adaptec SCSI interface (PC version)
- Adaptec AVA 1505AE/AI SCSI card and cable (PC version)

Specifications. 300x600 ppi resolution, interpolated resolution up to 4 800 ppi, sample depth of 30 bits per pixel 17 5x13x4 1 in (44 5x33x10 5 cm) in size scanning area 8.5X11 7 in (21 6x29 7 cm)

Price: $299

Epson Perfection 600

Like the Agfa SnapScan 310 Epson's unit is a colour/monochrome flatbed scanner It also requires a SCSI card and interface which are supplied with the unit For a flatbed format it's reasonably compact but will still require a goodly amount of desk space A practical and affordable unit for those who need a flatbed

Pluses
- comprehensive software package
- attractive user interface

Minuses:
- large footprint
- lengthy install process
- use limited by flatbed format

Includes
- LaserSoft Perfection 600 Driver
- Adobe PhotoDeluxe
- Visioneer PaperPort
- Xerox TextBridge
- Adobe PageMill
- Netscape Navigator
- Epson Perfection copy utility
- Adaptec SCSI interface (PC version)
- Adaptec AVA 1505AE/AI SCSI card and cable (PC version)

Specifications 600 ppi (main scan) scanning resolution, 1 200 dpi (sub-scan) 25 to 2,400 dpi interpolated (Win95/NT/Mac) 1 to 4 800 dpi interpolated (Win 3 1) output resolution, 12 7x21 7x5 1 in (32 2x55x12 9 cm) in size, weighs 11 5 lb (5 2 kg) scanning area 8 5x11 7 in (21 6x29 7 cm)

System Requirements. PC for Win95, IBM compatible 486 or higher for Win 3 1 or higher, 8 MB RAM (16 MB for Win NT) 25 MB free hard drive space CD ROM drive
Macintosh 68040 or higher processor, System 7 0 or higher 8 MB RAM (16 MB recommended), 25 MB free hard drive space, SCSI port CD ROM drive

Price: $449

HP ScanJet 5100C

The ScanJet 5100C is HP's latest hot off the press (released mid January 1998) colour flatbed scanner Two new features make it a standout in the affordable flatbed class First is what HP calls Intelligent Scanning Technology which allows scan and optimizing of pages simultaneously—that means rather than taking several steps (and the time) to complete the scanning process, the ScanJet 5100C does it all at once That will be good news to newbie users who want high-end results without complexity Second the 5100C is HP's first offering to connect via a parallel port connection making it easy to install and use as a desktop printer Excellent piece of equipment—and impressive in use.

Pluses.
- one step operations
- comprehensive software set
- good price point

Minuses.
- large footprint
- use limited by flatbed format

Includes
- HP PrecisionScan
- Caere OmniPage OCR
- HP ScanJet copy utility
- Adobe PhotoDeluxe 2.0
- Caere Pagekeeper Lite
- scanner cable
- one year warranty

Specifications. 300 dpi optical resolution 18 25x11 5x4 in (46 4x29 2x10 2 cm) in size weighs 12 7 lb (5 8 kg) maximum document size 8 5x11 66 in (21 6x29 7 cm)

System Requirements Win 95 or NT (compatible with Win 98) IBM-compatible with 486 or higher processor; 8 MB RAM (16 MB recommended) 60 MB free hard drive space CD ROM drive

Price $399

That heading should actually read "Best of Show" as each of these units is affordable and does the job well For many users though the Logitech FreeScan will come out on top as it combines a small footprint an affordable price and much more versatility than any of the others Let's put it this way I liked the Logitech FreeScan so much that I'm going to buy one for myself! ◆

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Innovation fund set to begin work

BY CHRISTOPHER GULY

If you're one for keeping track of Ottawa's budgetary promises, you might recall Finance Minister Paul Martin's $800-million allocation to the Canada Foundation for Innovation (CFI) a year ago.

The fund, established to accumulate interest, would dole out $180 million annually for five years to help modernize the research infrastructure at Canadian universities and colleges, research hospitals, and non-profit research facilities working in the areas of health, environment, science and engineering.

So what has the CFI done since its creation? Not much—yet. The delay is the result of several factors.

Firstly, the federal Liberals decided to call an election last May—just weeks after Bill C-93, which established the foundation, was approved by Parliament. Before the Grits hit the campaign trail, they managed only to appoint the chairperson of the foundation's board of directors, Dr. John Evans, a former president of the University of Toronto. It was mid-November before the 14 other directors—including Nortel's president of technology Gedas Sakus and Natural Sciences and Engineering Research Council president Dr. Thomas Brzustowski—were named.

Then, tragically, on Dec. 16, CFI president Dr. Keith Brimacombe, an engineer, died following a heart attack in Vancouver. Brimacombe had only held the job since October.

This year might look brighter for both the foundation and its intended beneficiaries, however.

May day

After producing a list of guidelines and selection criteria at the Dec. 1 inaugural meeting of the CFI's board of directors, the foundation is expected to begin handing out financial assistance late this spring. The deadline for proposals is May 1.

But the foundation will only support, on average, 40 percent of a project's costs. The rest of the money has to come from elsewhere (other levels of government, corporations or individuals).

"Our next step is to work out the details of the review process, and to hold a series of regional meetings early in the new year to explain CFI policies and to answer questions from the research community and the private sector," said CFI senior vice president Dr. Denis Gagnon in a statement. "We will also be talking to federal, provincial and voluntary agencies involved in research funding to find ways to collaborate with them."

While the first round of approved projects may be modest in scale (recruiting top-notch researchers or buying new equipment), the CFI's piggybank holds the potential to expand into larger projects. As of Oct. 17, the $800 million fund had accumulated $12 million in interest. ◆

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MacRant

continued from page 35

Hard times for hard drives

Seagate Technology Inc. is closing its Irish disk drive manufacturing plant and laying off more than 1,400 full-time and temporary employees. It blames the brutal competition plaguing the industry. Also cited are overcapacity, price wars and Asia's financial woes.

Yet, at the same time, DISK/TREND market researchers in Mountain View, Calif., expect figures to show 1997 worldwide sales exceeded US$34 billion, with more than US$75 billion likely by 2000.

Seagate and rivals Quantum and Western Digital have all seen their share prices plummet as falling prices and revenues take their toll. In Western's case, its stock dropped by 68 percent from US$54 to US$17.25. ◆

Links 98 scores a hole in one

info box

Links LS 1998 Edition
from Access Software
System Requirements. Windows 95/NT, Pentium 90 MHz CPU (133 MHz recommended) 16 MB RAM, 4x CD-ROM drive (MPC Level 2 compliant), 1 MB DirectX-compatible video card capable of displaying 800x600 resolution in 32KB colors, 42 MB of free hard-drive space (estimated), 8-bit sound card, mouse.
Price $49.99.

BY MARC SALTZMAN

★★★★☆

Any trip to your favourite computer game retailer will illustrate that PC golf games are by far the most competitive subset of the sports genre. Many have tried to topple the popular Links series (with Accolade's Jack Nicklaus series coming very close) but Access Software is back again with a fresh facelift and whole new set of features destined to secure their position on the top of the crowded heap.

Links LS 1998 Edition is a four-CD-ROM set containing four courses: three at Kapalua (Village, Plantation and Bay) and the Latrobe Country Club. Besides a conversion feature for the 21 add-on SVGA Links courses you my already own, there are also multimedia tours of Kapalua Resort and Latrobe,

"virtual reality" tours of the Plantation Clubhouse and Arnold Palmer's office and workshop, plus video "fly bys" for all four courses.

There are three major improvements from last year's version, Links 97. First, this game

is the first in the series with native 32-bit Windows 95 support. Long gone are the complicated installations and video and audio conflicts of the older versions of the series. Screen resolution can now be cranked up to 1800x1440 with over 16.7 million colours. New water reflections, fog and waving flags, plus aerial imagery such as moving airplanes, blimps, birds, helicopters, and balloons, all breath new life into a once-static environment.

Revving up the carts

The second improvement is in speed. Most PC golfers know how painfully slow screen redrawing can be after taking a shot. This has been dramatically improved here, since Links LS 98 features "look ahead" rendering. In a nutshell, the game calculates your ball's final resting position and begins to load the correct scenery into memory as the ball is in flight. Even with all of the details turned on, it's about four to five times faster than last year's version.

The third major improvement is the ability to play golf matches over the Internet via TCP/IP hook up (forget last year's headache of trying to configure DOS Kali). Since the game is native to Windows 95, DirectX allows for up to eight playing at once in a single game. Access Software now has a business relationship with GolfWeb (http://www.golfweb.com) and Mplayer (http://www.mplayer.com) for arranging and playing all courses and tournaments between gamers.

The gameplay is essentially the same: use the mouse on the pop-up control bot at the bottom of the screen to choose clubs, the standard three-click swing, and other miscellaneous options.

Other new additions to Links LS 98 are six modes of play (Scramble, Alternate, Match Play, Best Ball, Skins, and Stroke), many

continued on page 46

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Videoconferencing: Be seeing you!

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BY DAVID ROSEN & CARYN MLADEN

Considering the advances in Internet technology, digital TVs and the other component parts, you might expect videoconferencing to be integrated into everyday life. Why don't we call each other face to face?

Until recently, the only real way to get videoconferencing was by setting aside a dedicated room, buying a boatload of high-cost equipment and installing tricky—and proprietary—software. Naturally, you also needed the same setup at the other end of the phone line. In short, only top corporate executives and rock stars could afford the investment necessary for videoconferencing.

[illegible] the marketplace. [illegible] quality, but [illegible] get the job done.

[illegible] between $100 and $500 per workstation. At these prices, videoconferencing [illegible] graphics displayed [illegible] establish a link between the parties. It won't deliver the subtle nuances of body language, but it's fine for grandparents who want to see their new grandkids, as well as for small- and mid-sized businesses that need face time with remote staff.

Videoconferencing basics

Bandwidth is probably the most important limiting factor involved with videoconferencing image quality. Bandwidth is like a water pipe coming into your home: the larger the pipe's diameter, the more water can flow through in a given amount of time. [illegible] the wider the electronic pipe [illegible] telephone lines you are able to use for videoconferencing, the more bits of information you are able to send and receive in a given amount of time.

Standard residential or business lines are fine for voice communications. These lines were not designed to accommodate the amount of information needed for videoconferencing, however. In contrast, faster (and more expensive) telephone lines, such as ISDN or T1 service, have greater bandwidth but are expensive to install, maintain and service.

Smooth videoconferencing depends on several images (or "frames") per second being sent through the telephone lines using a modem. The greater the frame rate, the smoother the picture appears. Unfortunately, the greater the frame rate, the more frames need to be sent through the telephone line. At about 30 fps (frames per second), the human eye is fooled into thinking these discrete frames are continuous [illegible].

[illegible] RAM [illegible] videoconferencing.

There are dozens of [illegible] products on the market. Some are complete kits comprised of [illegible] on top of your monitor [illegible] and the necessary cable to hook up everything. Other companies let you assemble the bits and pieces yourself, letting you mix and match the components you want. Here's a brief rundown of some of the more popular videoconferencing products.

Connectix VideoPhone

Connectix's golf ball-shaped QuickCam has been souped up into a new product called VideoPhone. This inexpensive, entry-level product for Windows or Macintosh lets you have a face-to-face conversation online in real time. Image quality isn't in the same league as a top-of-the-line videoconferencing unit, but neither is the price. Costing only about $150 per workstation, VideoPhone is able to produce video and still images and uses your computer's existing audio components (sound card, speakers and microphone). You can use a traditional modem connected to your telephone line or go for an ISDN line, TCP/IP connection or whatever else you can afford. You'll need the increased bandwidth of a TCP/IP or NetWare LAN [illegible] with more [illegible].

Genius Kye Internet Video Kit

[illegible] Internet Video Kit [illegible] supports NTSC, PAL [illegible] TV standards used in [illegible].

Apple VideoPhone Kit

[illegible] Apple [illegible] QuickTime Conferencing Kit has been discontinued, but the Apple VideoPhone Kit is keeping the faith. It includes a color [illegible] videoconferencing and collaboration software, System Software 7.5.5, Farallon's Timbuktu Pro for document sharing and an integrated AppleGuide. The whole Kit sells for [illegible], but you can download just the software for free at Apple's Web site.

The product operates cross-platform, meaning you can conference with people using Windows, UNIX or Macintosh computers by accessing Netscape's CoolTalk audioconferencing products. You'll need a PowerMac or [illegible] plus an ISDN or faster connection [illegible] videoconferencing [illegible] about 10 to 15 fps.

Intel ProShare

The Santa Clara, Calif.-based chip giant has two videoconferencing products: one for entry-level, home and recreational use, and a second for higher-level, deeper pocket markets.

Priced at $399, Intel's Create & Share entry-level product is likely to be popular with small office/home office customers. The package contains all the hardware and software you'll need, including a 56Kbps modem.

Intel Business Videoconferencing 4.0 is Intel's corporate videoconferencing offering in the ProShare line and can operate in both Windows 95 and Windows NT environments. The product lets participants work in real time on a collaborative project and allows videoconferencing through a company's firewall without breaching corporate security. Starting at $1,199 (including the camera, software, microphones, an ISDN adapter and more), this is an excellent step up in quality for businesses where employees need to work together on a regular basis. Other products in the line range from about $3,000 to $10,000.

Kodak DVC 300 Digital Video Camera

[illegible] the Kodak DVC 300 is a sleek, lightweight [illegible]. It includes [illegible] PictureWorks [illegible] Multimedia [illegible] 320x240 pixels [illegible] 640x480 [illegible].

Vivitar MMP 3 and MMP 4

Vivitar's Multi Media Phone (MMP) [illegible] standard telephone line. The [illegible] bundled with Smith Micro's VideoLink and [illegible] Vision software, as well as White Pine's industry-standard CU-SeeMe [illegible]. Both the MMP 3 camera kit, currently available, and the enhanced MMP 4 kit [illegible]

[illegible] suggested retail prices of US$199. Both cameras support ISDN and Windows 95, 3.1 and NT. With the cameras operating in an ISDN mode, the software yields about 15 frames per second. The MMP-4 model can transmit up to 30 fps when connected via a USB port.

PictureTel systems

For some, videoconferencing is not simply an extension of their core business, it is their core business. From the company's portable SwiftSite system, which plugs into its own television-type monitor, to the Live50/Live100/Live200 series of PC-based systems, PictureTel's products are high end, high quality, multi-functional—and high priced. They come with a variety of features including multi-user white boarding (allowing many people to work on a document at the same time), freeze frame and full screen video capability. They can operate modem to modem, but they have been designed to work on faster connections, such as ISDN and LAN lines. Of course this stuff doesn't come cheap. SwiftSite, for example, retails for just over $10 000 and the other products are comparably priced.

Going soft

On the software side, check out CU SeeMe,

continued on page 44

Videoconferencing tools

To get a taste of what (else) is to be had in the way of videoconferencing equipment indulge in this somewhat random sampling.

Kenwood's Videoconferencing Toolkit

The Toolkit package allows you to share and edit spreadsheet or word-processing documents during your videoconference. It has full duplex capability, which means you can begin speaking without waiting for the other person to pause. It comes with a lightweight headset and microphone for hands free communication.
Kenwood, 800-KENWOOD,
http://www.kenwoodusa.com

Sony TriniCom 500 WorkStation

The TriniCom allows desktop videoconferencing for one-to-one communication. This system is designed in such a way that you can easily interact with virtually all standard based videoconferencing systems around the world. The kit includes Databeam FarSite software, Sony camera, handset, application software, and more.
Sony, 416-499-1414.
http://www.sel.sony.com

Intel TeamStation System

A PC based group videoconferencing system with everything included like a high-quality motorized camera and full duplex audio system. TeamStation offers an optional high resolution monitor for group viewing. You can maintain face-to-face contact while sharing an application on-screen and get simultaneous input from up to five locations.
Intel, 800-628-8686, http://www.intel.com

8x8 VC 115 ViaTV Phone

VC 115 is the first digital appliance to combine videophone and Web-access capabilities in one unit. ViaTV Phone turns any TV and touch tone phone into a videophone using telephone lines. Components include an 8x8 video processor chip, digital camera, and a modem compact enough to sit on top of the TV.
8x8, 888-VIEW8X8, http://www 8x8.com

Specom VisionCAM

This is a 24/32-bit (16.7 million/4.2 billion) true-colour digital parallel-port camera that works with all popular teleconferencing software. It also captures images for calendars, birthday cards, invitations, Web sites, brochures and newsletters, and can be used for live video recording.
Specom, 408-982 1883 (fax).
http://www.specom.com

Winnov VideumCam

Videoconferencing for both desktop and laptop machines. The VideumCam can zoom, pan and tilt from your machine locally or from another machine remotely. Users can control brightness, contrast, tint, colour, and audio level. Plus it takes pictures for Web sites and lets you drag and drop video clips to multi media presentations and Web sites. The small lightweight camera is designed to reduce power consumption and increase battery life.
Winnov, 800-810-9966,
http://picturephone.com

Telex NexVoice

This is the first digital computer microphone for USB (universal serial bus). The sleek design looks appropriate in the office and in a home office. For computer telephony, Internet phone, speech recognition, and videoconferencing, NexVoice is compatible with most existing analogue microphone input jacks.
Telex, 800-328-3771,
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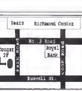
—Renée Wilson



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ATX Tower Case PS/2 Mouse + Pad

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ACER AP58 SiS 512K	$130	**Monitor**	
ACER AX6L (P II)	$240	Proview 14"/15"/17"	$185/245/475
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Videoconferencing

continued from page 43

a program developed by Cornell University and marketed by White Pine Software. This cross-platform, multi-party software makes videoconferencing available to almost anyone online. You'll need a video camera (such as a camcorder) and digitizer to send video, and the quality of the video depends on the quality of your camera, the sophistication of your computer, and the speed of your connection.

To connect in real time with more than one party, you'll [illegible] through the CU-SeeMe Web site [illegible] set up your own on a UNIX [illegible].

[illegible] communications has come out with a simple product called VocalTec that lets you talk long distance over the Internet and videoconference at the same time. The hardware is available for US$40—you'll still need a camera (for videoconferencing) and, of course, a telephone line.

Kinko's copy centres in the U.S. are starting to offer videoconferencing booths, where users are charged by the hour. Although this service is not yet available in Canada, folks at Kinko's say they plan to install the necessary hardware and software in selected stores soon.

Coming soon

It's been said before and it will be said again: videoconferencing is on its way into the mainstream. With the products available today, it's time for the early adopters to wake up and welcome them into their homes and offices. The rest of us will get around to it in a year or two. ◆

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Going beyond: TomaWeb's XpressIt

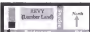
Perhaps the true test of any videoconferencing product is how it works within its environment. If people are uncomfortable using it, and have to fiddle with too many gadgets and wires, even the best system will sit around gathering dust. Recognizing this, certain shrewd companies are offering complete business solutions that incorporate videoconferencing into everyday functionality.

Canada's own TomaWeb offers XpressIt, a client/server Internet communication package that incorporates email, chat, and audio and video phone communication into the greater business system of data management and security. The whole corporate filing system can be located online with access from anywhere using a simple browser and with no incremental cost other than that of your ISP.

XpressIt creates a shared work area on the Web with documents filed by project and as accessible or secure as you choose to make it. The videoconferencing hardware is all third party so you can choose to use what you like. TomaWeb sells the software for $3,995 for a 10-user package, with a one-time licence fee of $95 per additional user. If you prefer to let TomaWeb act as your server, XpressIt Host is available for $4,995 plus $15 per month for each user.

—Lee Lester

TomaWeb, 416-539-0694, http://www.tomaweb.com



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info box

Monopoly Star Wars
from Hasbro and LucasArts
System requirements: Windows 95, Pentium 90 MHz CPU, 16 MB RAM, 4x CD-ROM drive, 50 MB hard disk space, VGA graphics adapter (1 MB VRAM), 800x600 resolution, mouse, sound card
Price: $69.99

★★★

BY MARC SALTZMAN

I [illegible]

[illegible]

[illegible] MIDI [illegible] Star Wars [illegible] plays [illegible] times throughout the game.

Yoda's hut with a hotel: $250

The *Star Wars* equivalent of *Monopoly's* properties are interesting: Boardwalk becomes Coruscant's Imperial Palace, railroads are space ships (Star Destroyer, the Millennium Falcon and so on), Chance and Community Chest cards are now Imperial and Rebel cards, and [illegible] Tax has been [illegible] to Docking [illegible]. Money is in Imperial credits [illegible] of dollars [illegible].

[illegible] up from [illegible] of the movies is [illegible] (including [illegible] from the [illegible] Special Edition versions), which adds to the entertainment factor.

The rest of the CD-ROM is pretty much the same as the classic board game, although for some reason they stuck with the old names for the corner squares: "Go", "Jail", "Go to Jail" and "Free Parking". This makes the board look a bit strange.

The object of the game is (still) to buy, sell

[illegible]

Slower than Jabba on Sunday morning

So why does the game not deserve three out of five? [illegible] Monopoly Star Wars is an extremely slow game, with an unbelievably lengthy load time between player turns and navigation around the board.

Even when choosing to install a whopping 261 MB onto my hard drive (the largest option available) and playing it on my trusty Dell Dimension Pentium II 266 MHz with 64 MB of RAM, I found myself (and a friend) tapping the spacebar to speed up the process—even if that meant no mini-video clip when landing on various properties. It got so bad at one point that we gave up and quit playing. Naturally, this problem was even worse when logging on to play a Net game between three players. As much as I enjoyed all the other features of the game, I just gave up.

Due to this severe downfall, Monopoly Star Wars falls into that "could've been great" category. Hey, I'm still playing the regular Monopoly CD-ROM that I reviewed for a couple years back!

If you fancy yourself a real *Star Wars* and/or *Monopoly* fan, then pick up the Monopoly Star Wars CD-ROM—but may your patience be with you. ◆

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Links 98

continued from page 41

[illegible] windows (you can have up to eight open at one time), new characters and [illegible] animations, [illegible] on screen, and much more.

The only beef I have with this game is that it should provide more courses or at least a course designer utility such as with Accolade's Jack Nicklaus 4 or 5. I don't mind the Arnold Palmer endorsement, but if it's a matter of space, I couldn't care less about taking a 360 degree virtual tour of his office.

Even if you've purchased Links 97, this relatively inexpensive product is worth the extra coin for the 25-plus new features. And if you already own the game, make sure to grab the Links LS 98 update patch from http://www.accesssoftware.com (version 1.32).

I gotta run. I just shot a birdie on the ninth hole of Kapalua Village and my partners are waiting to even the score. ◆

They love this game

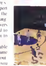
BY ALAN ZISMAN

info box

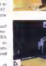
EA Sports NBA Live 98
from Electronic Arts Canada
http://www.easports.com
Price $60

In December's issue of *CP*, we assembled a team of 13-year-old boys to look at the cream of the computer hockey game crop to pick the CD ROM to best let Canadian youth sharpen their virtual skates and head for the digital ice. But with both Toronto and Vancouver now sporting NBA basketball franchises, perhaps there's competition for the sport that most captures the attention of our young. Certainly our reviewers were looking forward to turning their attention to the NBA on screen.

But while we were able to make the hockey game feature into a shoot out, the NBA comparison turned out to be uncontest. Acclaim Sports never responded to our efforts to obtain a copy of their NBA JAM Extreme (boo!) and while Microsoft Canada promptly sent a copy of their basketball game, Full Court Press, the company decided not to update it for the 1997-98 season and withdrew it from the market.



That left our panel with a single game, Electronic Arts's NBA Live 98. Luckily, as with NHL 98, EA Sports has once again produced a winner.



The game ships in both Sony Playstation and PC/Windows 95 CD ROM versions; our panel looked at the PC version. It requires a minimum of a Pentium 100 MHz CPU, 16 MB RAM and 50 MB of drive space. Multiple players can connect via modem or network, with help from EA in matching up potential online players (go to http://www.ea.com/multiplayer matchup).

The program boasts 400 NBA players, with increased realism from 3D polygon animation based on motion capturing real team members in action (superstar Michael Jordan, however, was represented by a faceless Number 89 named "Guard").

Keeping it real

Our panel members, Joey and Frankie, both reported that the game was easy to learn with (for a change!) a useful instruction manual. The boys enjoyed the announcing by TNT network's Ernie Johnson Jr., which they felt did a good job of following the game action and added to the realistic feel. The realism was enhanced by the look of the court, according to Joey, who was impressed by the marks on the court and on the hoop. Frankie found the use of actual players' faces (except for Jordan's) an improvement over earlier games featuring identical clones.

Frankie complained, however, that the sound effects were a little too quiet, although Joey especially liked such sounds as the ball hitting the ground and people bumping into one another.

Both boys hoped that next year EA will improve the jams. Frankie hoped that "when the guy jumps up and puts it in, he should have a little move," while Joey fantasized about a "monster jam: if a player makes three shots in a row, the ball would catch on fire or shatter the glass." Even so, the panel agreed EA Sports has another winner here, with both boys giving NBA Live 98 a perfect 10. ●

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有關 Windows 的一些問題

作者：林啓清 (TimLin)

一、前言

身在加拿大，雖然使用中文的機會比在國內少一點，於是有些人就乾脆安裝英文版的Windows，

裝了英文版的Windows就只能顯示英文，對於中文的訊息只會在螢幕上出現一堆看不懂的亂碼?

筆者的看法是，只要您會用到中文(也許很久才用一次)，總建議您直接裝中文版的視窗軟體，而不要安裝英文版的視窗軟體?

因爲，英文版的視窗軟體只能顯示英文，中文版的視窗軟體卻能同時顯示中文及英文。單是只爲了這個原因 您就應該使用中文版的Windows，

很多人在剛開始的時候，並沒有想到有關中文的問題，等到突然要用到一點點中文時，卻完全無法處理，才開始捶胸頓足，那也已經無濟於事了，

也許有人就說，不是有一種軟體可以讓英文版的Windows能夠處理中文嗎?那我只要安裝這種軟體，不是就能使用中文了嗎?

別急 筆者等一下就會爲您來分析一下)

二、使用Windows需要怎樣的硬體

對於想要使用電腦的人，一定很想知道，現在應該買怎樣的機型?怎樣的機型才合用來安裝Windows?

對於這個問題，筆者有以下的建議

1)使用中文版的Windows
Pentium以上的CPU
32MBRAM(至少)
硬式磁碟機容量1.6GB(至少)

2)使用英文版的Windows
Pentium以上的CPU
16MBRAM(至少)
硬式磁碟機容量1.0GB(至少)

當然，低於這個規格並不表示就不能跑Windows，只是效率就很差?

比較有爭議的可能是硬式磁碟機的容量 Windows真的需要那麼大的硬碟空間嗎?筆者的考量是：裝了Windows後，大部份的人都還會裝其他的軟體，而Windows的應用程式都比較大，所以準備大一點的硬碟是必要的。

另外，有一點是大家所忽略的?那就是當Windows發現記憶體不足時，它會自動去使用硬碟來充當暫時的RAM(記憶體)，所以當硬碟的容量也不夠Windows拿來充當記憶體時，那種後果很慘(當機或不明原因就就出現)?

這就是爲什麼每次去檢查硬碟所剩餘的空間時，明明沒有裝新的程式或存新的資料爲，但是硬碟的容量卻會越來越小，或是突然變大的原因了?

就是因爲Windows有這種借用硬碟的特殊手法，所以硬碟的速度就會直接影響了您的Windows的速度了?您現在明白爲什麼別人家的電腦跑Windows都會比您快的原因了嗎?

因此筆者建議，您需要您的Windows跑得穩，跑得快，那您就必需要 買CPU、硬碟、RAM這三個東西?而不是去找那一家電腦店賣的最便宜?

中國人有一句話，便宜沒好貨 奸商要騙的都是那些自以爲聰明的人 ,Q

PS 現在幾乎已經買不到低於2.0GB的硬碟了?

二、中文Windows與英文Windows的差別

如果您絕對不會用到中文(包括在Internet上看中文)，那筆者絕對建議您裝英文的 Windows，反之，請裝中文版的?

而裝了中文版的Windows會有什麼缺點呢?那就是速度會比較慢一點(因爲CPU要花時間去處理中文)，需要的RAM會大一點(因爲要事先載入中文的字形)，所佔用的 硬碟空間就大一點(因爲要存放中文字形檔)?

如果您不能忍受以上的缺點，請不要安裝中文版的Windows?

翻翻ComputerPlayer您會發現有人在賣中文界面軟體(TW"urUW")，這些軟體號稱可以讓您英文版的Windows可以處理中文，是真的嗎?

雖然是真的，但是會有一些問題出現，您也必須能忍受，

首先，這些軟體所用的字形檔跟中文版Windows的字形檔是不相容的，所以也不可以拿這些軟體的字形檔來中文版的Windows上用，您也不可以拿

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版Windows的字形■來■這些軟■用(否則■■■化■去買他們的字形■)?

而且　這種界面軟■大多有許多版本，而之■的差別■是在所附的字形多寡?

如果您所買的基本版，■所■示的中文字大多很■(也許有漂亮的，但筆者沒■過)，以此來吸引您買更好的版本。當然，在■幕上看很■，印出來當然更慘不忍睹了!

而■佔空間的就是字形■(TrueType Fonts)，當您買了許多的字形■，您所花的■及所佔的■■空■絕對已超過直■安裝中文Windows?

另外，還有一■更■重的缺點就是，有許多軟■會沒辦法打中文或■示中文(■買這■界面軟■■啥)?也許，有人會■■是您所用的軟體問■，並不是界面軟■的■?

筆者舉■例　您請了一■■譯來■您■客人■通，平時都處理的很好。有一天來了位客人■了一連串的話，但是■譯不懂，■不出來，您是要另外再找一■■譯，還是■客人■■?

這種界面軟■的另一■問■是，在■幕上■■所顯示的位■往往與實際上的不合?而且當您按一下Backspace，照理應該刪掉一個中文字(假設是要刪中文)，但是它卻只能刪半■中文字!也就是要刪掉一■中文字要按兩下Backspace!

有的■友更大了，以■裝了這種界面軟■後，只要打英文就會自動變成中文(這又不是自動■譯予■)?

每種軟■都有優　缺點，當您認為其優點大於缺點，■這■軟■就適合您用。

科技日新月異，也許今天不行的，明天就可以，■也不知道?

筆者只想■各位，如果您們的■用中文，還是安裝中文版的Windows才是正途!

PS 如果您■■理多■■言(日、■、■筆■)，目前也只■裝這種界面軟■，而沒有其■方法?

四、■■

在偶■春節即■來■的前夕，筆者要■■本■誌的Sherly小■，是■■筆者有這■■■的空間。當然，更是■■電多的■■支持，筆者收到不少E Mail及■話。

對於，■從別省打■話來的■者，筆者只■說可是約在■話裡解決您的問■，■爲不■的地方，■望大家見■!

有許多■者打■話來給筆者，筆者研判病情後，要■■要■來■筆者看看才■知道到底生了什麼病?

爲什麼筆者不在■話裡直■把問■解決了，而要人家把■■■到■■這裡!

試問各位，您打■話告訴■生您肚子■，您要■生研判您生了什麼病，要吃什麼■?

我■沒有■一位■生可以■您■(■非他有特異功能或通■)?

肚子裡有太多的器官，所以只講肚子■，是不■研判出■一■■官出問■，必須■過■學■■才■加以判斷及治療?

同■的，您有■過Windows有多少■案在裡面嗎?您■到了■■■案，有時筆者■是■要■■■查■看才■下判斷的?

■曾經有位■者說，■可是與■不起我所收的■用?問■是，我打從一■始就沒■過要收■的■呀?這年是好人很■■　我只是說有■■來吧

,Q

■會■■在2月16日晚上7點到台■文化協會有一■■■，如果■者有興■也可在當天到■與筆者一■(詳■■直接與■■會■■)!

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紫微，意指人上最尊貴的星，北極星。所謂（紫微斗數）論命，卻以紫微星為主的十四主星，配合九十星，南斗星、北斗星之吉凶，來判斷個人[illegible]術者

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[illegible]內農曆，或西洋[illegible]曆，使用者可憑自己的生[illegible]或星座，來看某個日子裏自己的運勢如何

求神問卜亦不需要長途跋涉到處[illegible]找了啊

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Cleaning out your cache

Q: I've been using America Online 3.0 to reach the World Wide Web for a few months now, but a friend told me I should be "throwing out my cache files" on a regular basis. The problem is I tried tossing out some files I thought were extra about a year ago, but then the software wouldn't work. Eventually I had to reload my AOL onto my hard drive and start again. Now I'm scared to throw anything out. Not only that, but I'm concerned about letting my friend near my computer in case she breaks anything. What can I do?

Kelly, via AOL

MacShrink David Rosen replies: Well, first of all, it's a good idea to clean up your cache on a regular basis. You do have to perform this procedure safely, however, or you may well end up throwing out the wrong files—files that may be necessary to the operation of your browser.

Many communication programs, such as America Online, use a technique called caching (pronounced "cashing") to help customers surf the Web faster. The technology behind this magic is pretty simple, at least on the conceptual side. The software remembers each site as you visit it and stores parts of each Web page on your hard drive. The advantage is that your computer doesn't have to download all those snazzy-yet time consuming graphics every time you visit a particular site.

Most Web graphics are pretty small, but your hard drive can quickly fill up with lots of files you don't even know you have. Another complication is that the AOL Web browser software doesn't let you decide to remember a site or not. It downloads and stores the graphics from every site you visit. Whether you're a daily visitor or just dropped by the site a few months ago, your hard drive continues to collect graphics.

Many Web sites, however, change graphics frequently, so saving them may not prove a great time saver. Plus, there are some tools on the Internet that can read where you've been on the Web by looking at the cached files on your hard drive. So keeping a long list of your visits isn't a good idea for privacy reasons either.

Fortunately, Web browsers, such as the one AOL uses, let you toss out these files. The trick is to remember to do this on a regular basis. Some people delete the files after every surfing session, others do it whenever they think of it. Here's how.

If you are using the 3.X version of AOL, open up your Mac's System folder by double clicking on it. Next, find the Preferences folder and open it. After this, find the America Online folder and open it. Finally, look for the folder named Browser Cache. This is where AOL stores all the graphics files that are cached from your Web visits.

Open up the Browser Cache folder to see all the files you have accumulated. Select all the files in this folder by moving your cursor to the Edit menu and choosing the Select All command. Once all the files are selected, you can move them into the Trash and choose the Empty Trash command from the Special menu. As to the safety of letting your friend near your computer, I'm afraid that's a judgment call. :)

Tell me about my Mac

Q: I just inherited a PowerPC 7200 complete with a 15-inch Apple monitor from a fellow employee who recently left the company. The service guy came and installed the computer but couldn't tell me much more about it. Can you?

Mirabelle, via an ISP

MacShrink David Rosen replies: Sure. The PowerPC was introduced in April 1996 and is based on the Motorola PowerPC 601 running at 120 MHz. The computer needs System Software version 7.5.2 or higher and has 32 KB of Level 1 cache. Unlike some Macs, the Power Mac 7200 doesn't have any RAM soldered onto its motherboard. Instead its four 168 pin DIMM slots let you configure your Mac with a maximum of 512 MB of memory.

Your Power Mac 7200 probably came with 1 MB of video RAM already installed. With this amount of VRAM your computer is capable of displaying up to 32,768 colours at any given time in a 640 by 480 matrix. If you need to see up to 16.7 million colours on screen at any time, you will have to add another 1 MB of VRAM.

Giving Windows 95 a Tweak

Q: In the Win95 Software Screen you can (un)install software. But I've got quite a lot of "old" software in that list that isn't on my hard drive anymore (the uninstall didn't work properly, especially with a lot of shareware) and now these programs are in the list annoying the hell out of me. Do you know where I can remove these nonexistent programs from this list?

Raymond van der Holst

Alan Zisman replies: There are two ways to do it.

The hard way: Open REGEDIT, the Registry Editor, by typing "Regedit" (no quotes) at the Start Menu's Run line. In the Edit menu, use the Find command to search for instances of the program name; delete each instance. Pressing F3 will repeat the search. Continue until there are no instances of that program in the Registry, then repeat for the next program.

The easy way: Get a copy of Microsoft's free Powertoys add-ins for Win95 (available at http://www.microsoft.com), or separately obtain the TweakUI Powertoy. TweakUI has lots of useful functions for working with the Win95 User Interface, including the ability to easily remove program names listed in the Add/Remove list. TweakUI has a lot of useful functions, as we'll see in the next letter...

Pesky icons won't go away

Q. I installed MSN [Microsoft Network—an Internet access provider] to take advantage of the free month of use, and then promptly uninstalled it. Since that time, the MSN "shortcut" has been on the desktop, and I can't get rid of it. I've attempted to delete every aspect of MSN in the registry and have succeeded in making the icon a standard "Folder," but am still unable to delete it. Am I forever stuck hiding it behind the start bar?

Gary Ailes

Alan Zisman replies: You can get rid of it, along with most other persistent desktop icons, using Microsoft's multi-talented TweakUI add-on. TweakUI's Desktop feature lets you easily remove persistent icons from the Desktop.

Long list lament

Q: When I click Start and Programs my list overflows the screen. How can I combine them? For example, instead of seeing all the programs of Office, I'd like to see only "Office" and click that to get the program list in Office. There are others I'd like to combine, too. Is there an easy way to do that?

Wayne Field

Alan Zisman replies: Yes. Too many programs insist on creating silly top level Programs sub folders filled with the Program EXE file, a help file, and a read me. And users who've upgraded from Win 3.x typically get too many sub folders corresponding to Program Manager groups.

There are several ways to customize the Start Menu/Programs list. My favourite is to right click on the Start button (the secret to Win95 success is "when in doubt, right click on anything in sight") and choose Open from the pop-up menu.

You'll get a My Computer-like large icon view of the Start Menu, with a folder labeled Programs. Open it to see the sub folders that correspond to sub menus. Create new folders, copy and delete to your heart's content, using standard Win95 file management techniques.

The results will immediately appear in the Start Menu.

Win95 compression depression

Q: Do you know how to copy the Win95 files from the CD ROM to a floppy disk? I've managed to get all the non CAB files to one disk but the rest of the WIN95 ??.CAB files are too big for my 1.44 MB floppy.

If I wanted to back up my Win95 CD ROM, how could I do that if the files are bigger than the disk and "zipping" them makes them larger, since they're already compressed?

Daniel Mueller

Alan Zisman replies: Depending on the version of your Win95 CD ROM, you'll find most of the installation files (.CAB or compressed "cabinet" files) are either 1.7 or 2.1 MB in size—too large to fit on a standard 1.44 MB floppy. And you're right, since they're already compressed, programs like PKZIP can't compress them further.*

There are a number of shareware programs that can be used to format 1.7 MB floppies, but that won't help if you have the 2 MB CAB files. But you can still use PKZIP to create a compressed set of disks from the entire Setup folder.

Use PKZIP's "-&" option, which enables you to zip items across multiple floppies. If you type "PKZIP A W95.zip D:\SETUP\*. -&" (no quotes) at a DOS prompt, you will create a set of floppies with a zipped backup of the entire contents of that folder.*

Note that it doesn't do a good job of error checking. Test the back up set by unzipping it onto your hard drive (which you'd need to do to use it), before assuming you can rely on it!

16-bit scare

Q. Can I run any 16 bit or DOS games or programs on the newer Windows 32 bit machine? I hear that it would crash the hard drive if I ran 16 bit.

Terry Barker

Alan Zisman replies: Very much untrue! Win95 will run nearly all (16-bit) DOS and Win 3.x programs. However, take heed of the following:

1) DOS/Win 3.x disk utilities should be avoided, since they are unaware of Win95 long filenames, and can inadvertently destroy the long filenames (this may the reality behind the rumour you heard).

2) Some DOS programs (typically older games) need to be run in so-called MSDOS Mode, allowing them near total control over the hardware.

3) A few Win 3.0 programs won't run without being "tricked." There is a MKCOMPAT.EXE (Make Compatible) program in C:\WINDOWS for that purpose. ◆

- **Send Mac-related questions to David Rosen at MacGuy@tcpon.com. Note: all questions become the property of MacShrink and David Rosen.**
- **Send OS/2-related questions to Kevin Linfield at linfield@torfree.net. Note: please continue to send your OS/2 questions in to You Asked Us. We will make every effort to include OS/2 questions and responses as we receive them.**
- **Send Windows and other software questions to Alan Zisman at azisman@mail.bc.rogers.wave.ca**

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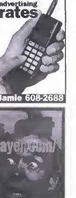

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